JAPANESE / AUSTRO-TAI

Linguistica Extranea, Studia 20

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1990

KAROMA PUBLISHERS, INC. ANN ARBOR

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ISBN: 0-89720-078-0 (paper)
Printed in the United States of America

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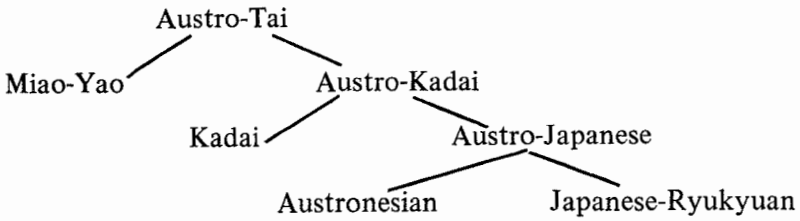
1. Introduction:

The Austro-Tai language stock, as outlined by the author more than a decade ago (1975), consists of Austronesian and two mainland language families: Kadai (including Tai, Kam-Sui et al.) and Miao-Yao. It now seems evident, from a preliminary review of the evidence, that Japanese and Ryukyuan constitutes a fourth component of this stock, with relationships as diagrammed below:



The concept of a relationship between Austronesian and Japanese, as indicated in the above diagram, is hardly a novelty. The thesis was first presented in detail by the anthropologist/linguist D. Van H. Labberton (1924–25), and over the years there have been a number of supporters, both in the West and in Japan, the latter notably including T. Kawamoto (1977, 1978). Other relationships for Japanese have been suggested, the principal alternative being a connection with Korean, especially since the appearance of a detailed study by S. Martin (1966). This view has won a degree of recognition from the broader linguistic community, always accompanied by a shade of doubt, as in the write-up on this subject in the work on classification by Ruhlen (1975).

The failure of the Austronesian hypothesis to capture a larger share of the audience lies primarily in the completely inadequate presentation

that it has suffered. Kawamoto (1977, 1979) presents a host of comparabilia or 'look-alikes' rather than cognate sets per se and, in fact, states (1977:25) that his comparisons involve 'cognates or possible cognates.' What is more, the phonological correspondences that he suggests read in either direction/all directions (!), hardly enhancing their credibility. Western scholars have simply compounded the linguistic crimes committed against the Austronesian thesis. This is superbly exemplified by the recent (1983b) article on the subject by R. A. Miller in the prestigious Kodansha encyclopedia, which includes the following assessment:

> Certainly there are elements in the Japanese vocabulary that may very well have originated through some variety of extremely remote contact with Malayo-Polynesian speakers...

His two Old Japanese (OJ) examples, as if chosen to prove how really 'remote' the contact was, are as follows: OJ Fisi 'sandbar', P(roto)-Malayo-Polynesian *pat'iγ' seashore', which combines dubious semantics with impossible phonology (see 6.1 for the actual vocalic correspondences); OJ isa 'whale'; P-Malayo-Polynesian *it'i 'flesh, meat', with impossible semantics as well as phonology, the 'whale' a poor substitute indeed for the obvious cognate here: Jp. sisi 'flesh', paralleling reduplicated *t'it'i = *tsitsi forms in Austronesian (see FLESH). Surely the unsuspecting reader, even a linguist not familiar with the field, will almost automatically reject the Austronesian hypothesis on reading an 'authoritative' article of this sort. The facts of the case are altogether different, however, as the following pages will attempt to show.

It must be stated at the outset of this study that the conditions for its implementation are far from ideal. A primary problem is the lack of a reconstruction scheme for the ancestral Japanese-Ryukyuan language (Proto-Japanese-Ryukyuan). Fortunately, however, Old Japanese forms are available for most of the roots involved, from a period before the eight-vowel to five-vowel contraction in the language. Still one might argue that we are 'leap-frogging' here, making use of a procedure that the writer (1973) has called 'teleo-reconstruction.' Properly, it can be argued,

we must wait until Proto-Japanese-Ryukyuan forms become established, at which time we shall be in a position to compare Japanese-Ryukyuan with Austronesian and the mainland Austro-Tai languages.

This argument has long been a favorite in certain schools of linguistics but it is not without serious flaws. It is highly advantageous to set up a provisional proto-language before all the intermediate meso-languages are reconstructible since problems encountered in the latter can at times be solved only by reference to the proto-language. The key word here is 'provisional' and it is to be understood that proto-language refinements of all kinds, including outright deletions as well as numerous addenda, will be encountered as more and more meso-languages are brought into play. One must not hesitate unduly in starting play, either in East/Southeast Asia or elsewhere. One can find fault with a failure to make use of existing sources, e.g., Dempwolff's failure to consider existing Formosan sources in reconstructing his Uraustronesisch (= Proto-Malayo-Polynesian) and Martin's failure to make any systematic use of Old Japanese forms in his Korean-Japanese comparisons (see the review article by Miller, 1967). This is quite another matter, however, than sensible teleo-reconstruction, as represented by Dyen, Dahl, and other Austronesian comparativists, who have not hesitated to make use of Formosan cognates in setting up Proto-Austronesian roots before the reconstruction of the three meso-languages involved (!): Proto-Tsouic (Tsuchida 1976), Proto-Atayalic (P. J-K. Li 1981), Proto-Paiwanic (still lacking). The reconstructions of Tsuchida and Li have been helpful, to be sure, but one has not had to wait for them to come along before venturing upon some Proto-Austronesian reconstructions. Similarly, the eventual reconstruction of Proto-Japanese-Ryukyuan will surely illuminate the provisional findings in the present study but the linguist would be ill-advised to put off his research until that happy (and probably far-off) day.

2.0 The Austronesian component:

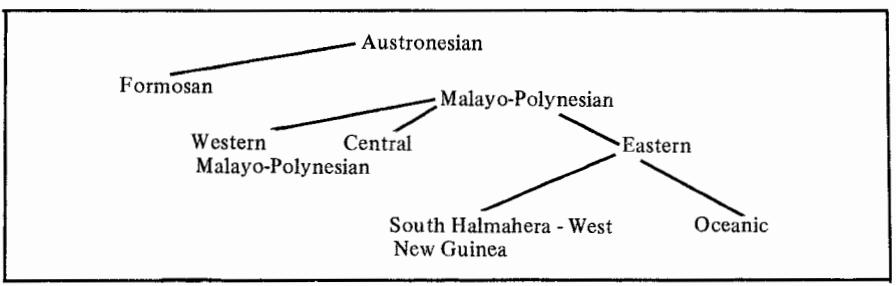
This is the key component of Austro-Tai in certain respects, notably in its maintenance of disyllabic and (occasionally) trisyllabic roots. It is also the component that stands closest to Japanese and, by inference, to any Proto-Japanese-Ryukyuan awaiting reconstruction. There are several hundred languages in the family, extending from Madagascar in the west (Malagasy) to Taiwan (Formosan languages) in the north, the New Guinea littoral in the south and the island world of the Pacific in the east. The Austronesian specialists are in general agreement in splitting off the Formosan languages from all the other languages of the family, as in the writer's own handling of this subject (1975:136–7), but they frequently differ as to details; the following subgrouping is from Blust 1981:

Austronesian

Formosan Malayo-Polynesian

Western Malayo-Polynesian | Central Malayo-Polynesian | Eastern Malayo-Polynesian

South Halmahera- West New Guinea | Oceanic



Formosan: The Austronesian languages of Formosa. Malayo-Polynesian: All non-Formosan Austronesian languages.

Western Malayo-Polynesian: The Malayo-Polynesian languages of western Indonesia and the Philippines, including Chamorro, Palauan, Chamic, and Malagasy.

Central Malayo-Polynesian: The Malayo-Polynesian languages of eastern Indonesia, including the Lesser Sunda Islands from Biamanese east, the southern and central Moluccas, and the Sulu archipelago.

Eastern Malayo-Polynesian: The languages of the South Halmahera-West New Guinea and Oceanic groups.

South Halmahera-West New Guinea: The Malayo-Polynesian languages of southern Halmahera, Sarera (formerly Geelvink) Bay as far as the Mamberamo River, and of the Raja Ampat islands (Waigeo, Salawati, Bantata, Misool), together with their satellites (Gebe, etc.).

Oceanic: The Malayo-Polynesian languages of Melanesia, Micronesia, and Polynesia, except as stated elsewhere.

NOTE: Central Malayo-Polynesian and Eastern Malayo-Polynesian may share a common node below Malayo-Polynesian. The position within Malayo-Polynesian of Yapese and of the languages of the Bomberai peninsula, west New Guinea, is unclear.

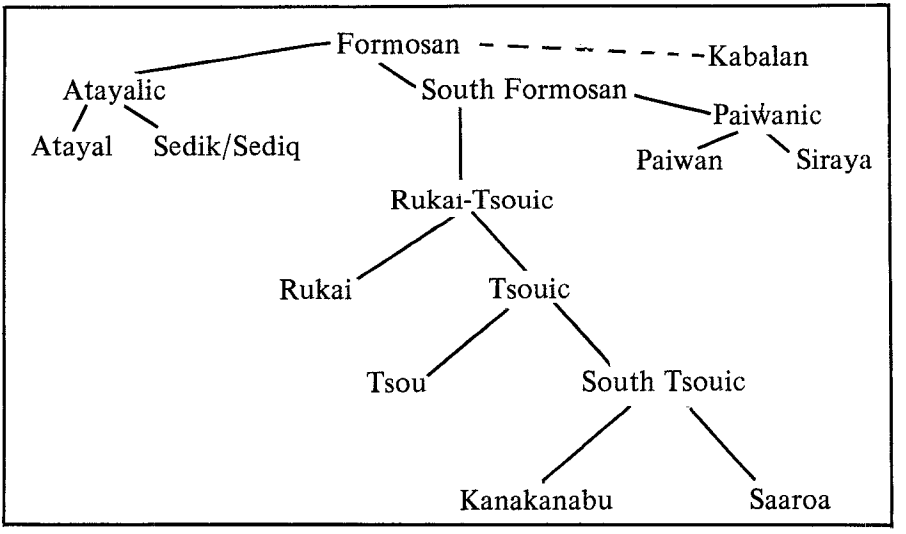
The same Austronesianist (Blust 1980a) presents reconstructions at three different levels, as indicated in the above diagram: Proto-Austronesian, Proto-Malayo-Polynesian, and Proto-Western Malayo-Polynesian. In the present study the last of these is replaced by Proto-Hesperonesian (Dyen).

As can be seen from the foregoing, the Formosan languages play a key role at the proto-level (Proto-Austronesian) that concerns us here.

Blust diagrams the subgroupings as above but makes the following comment (1980a:12):

> Although the Formosan languages probably belong to more than one primary AN [Austronesian] subgroup, they will be treated as a single witness to minimize possible distortion in lexical reconstruction due to borrowing.

Dyen (1983), on the contrary, argues that the Formosan languages do constitute a single subgroup while Tsuchida, who has worked intensively with these languages, presents the following scheme (Tsuchida 1976:15):



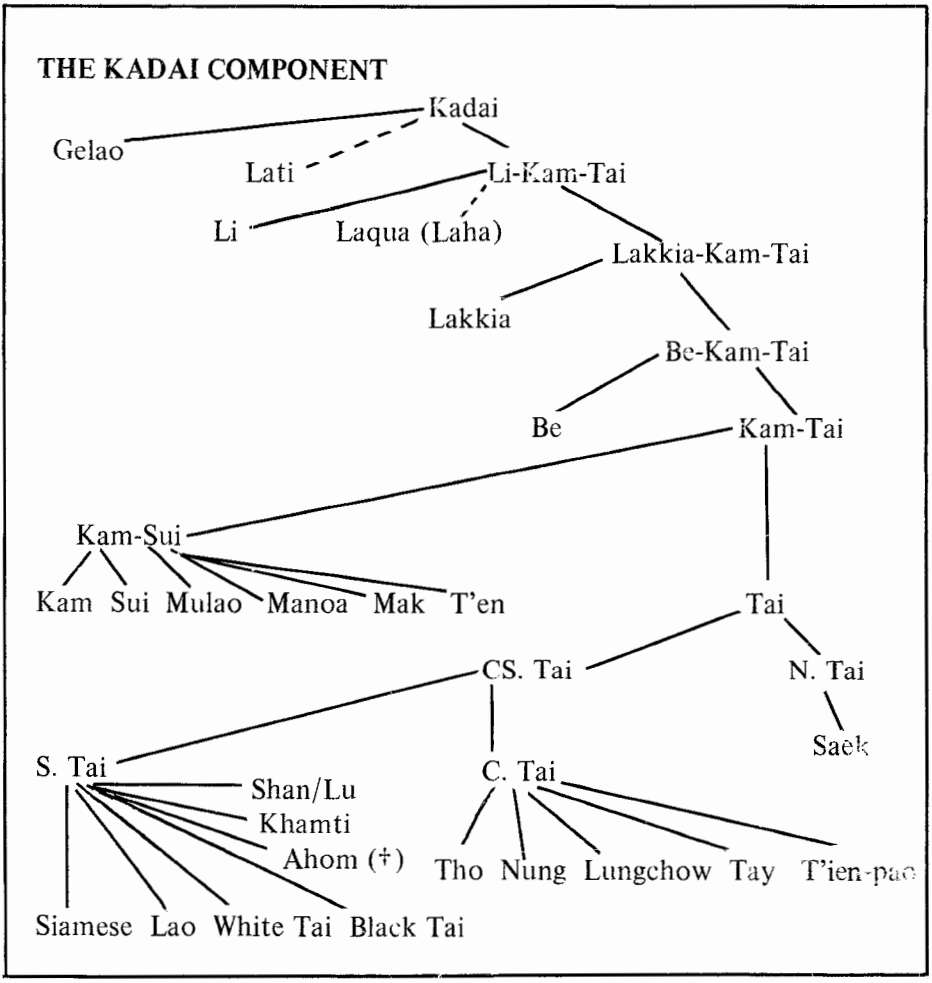
THE FORMOSAN LANGUAGES

The writer tends to go along with this scheme, with reservations about the removal of Rukai from its usual position within the Paiwanic group. The dotted line to Kabalan (Tsuchida: Kavalan; also Kuvalan elsewhere; see Moriguchi 1982, who writes Kbalan) indicates the deviant

nature of this moribund language, which appears to have maintained an original suprasegmental system (8.4). The present study follows Blust in treating the Formosan languages as a single witness, with both the Atayalic group and Rukai supplying some key forms in Japanese comparisons. Reconstructions labeled as 'Proto-Austronesian,' rather than 'Proto-Malayo-Polynesian' or 'Proto-Hesperonesian,' are based on Hesperonesian/Malayo-Polynesian sets that include at least one Formosan cognate. Hypothetical Proto-Austronesian-level reconstructions, lacking a cognate in either Hesperonesian/Malayo-Polynesian or Formosan, are labeled 'Proto-Austronesian-.' Many of the languages involved, particularly in the Formosan group, have not yet been explored in any real depth and it is anticipated that many of our 'Proto-Austronesian-' labels will in the future be replaced by 'Proto-Austronesian' labels, just as many of the roots labeled 'Formosan-only' by Dyen have turned out to be represented by cognates in the Philippines and elsewhere.

2.1 The Kadai component:

The Kadai languages are spoken in the more northerly regions of Southeast Asia, with present representatives in Thailand, Laos, Vietnam, Vietnam, Burma, and southern China and one extinct representative (Ahom) in Assam, India. The Tai languages are the best known of the family, with fairly close 'cousins': the Kam-Sui languages, in central/southern China (Gwizhou and Gwangxi provinces). The family also includes three languages spoken in Vietnam: Laqua, Laha, and Lati; two on Hainan: Li, Be; and two others in mainland China: Lakkia, Gelao. Li and Gelao, particularly the latter, have widely divergent 'dialects' that are clearly of 'language' status; hence both Proto-Li and Proto-Gelao are to be considered as meso-languages, with substantial reconstruction problems. The provisional subgrouping is as follows:[1]



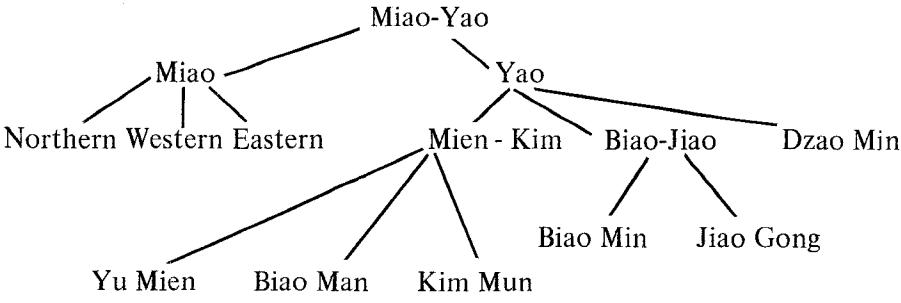
Kadai presents subgrouping problems similar to those encountered in Austronesian, as described above (2.0). Gelao definitely represents an early split and probably Lati as well, though the latter is so poorly known that its placement is problematic. Lakkia shares in some Kam-Sui innovations (see Glossary: ABOVE) and the writer (1983a) has

indicated a provisional subgrouping with Kam-Tai, with Be coming off earlier. Haudricourt (1967), on the other hand, places Be close to Tai. A count of shared cognate sets from the basic 100-word Swadesh list, however, indicates an intermediate placement for Be, between Lakkia and Kam-Sui: Tai and Kam-Sui 53, Tai and Be 47, Tai and Lakkia 39; also Kam-Sui and Be 46, Kam-Sui and Lakkia 42. By way of contrast, both Tai/Gelao and Kam-Sui/Gelao yield the count of 21, confirming the early splitting off of that meso-language. The other meso-language, Li, stands much closer to the Kam-Tai nucleus in this comparison: Tai/Li 39, Kam-Sui/Li 32 (all these figures are approximate and are subject to some distortion because of incomplete lexical material). The writer's earlier (1983a) diagram can now be modified, as above, still to be considered provisional.

2.2 The Miao-Yao component:

The homeland of the Miao (Hmong) and Yao languages is central/southern China, with later incursions across the borders into Burma, Thailand, Laos, and Vietnam. The basic split between these two divisions of the family is comparable with that between Tai and Kam-Sui, each with somewhat over 50% shared cognate pairs from the Swadesh 100-word list. Recent work by Chinese linguists indicates a basic threefold division both for Miao (Wang 1979) and Yao (Mao, Meng, and Zheng 1982). Two subsidiary members of the family, Na-e and She, occupy positions that remain indeterminate on the basis of available material; cf. the following diagram (Miao terms after Purnell 1970):

THE MIAO-YAO COMPONENT



The Na-e (Pateng) language, known only from a brief word list recorded shortly after the turn of the century (Bonifacy 1905), appears to stand somewhat apart from the basic dichotomy in the family. It resembles Miao in its merging of finals but shows some highly distinctive forms, notably the remarkable cognate for BIRD (see Glossary), with its unique (for Miao-Yao) retention of an original labial initial. It is even possible that Na-e represents the first split off the Proto-Miao-Yao nucleus but, unfortunately, the language appears to have gone unrecorded since 1905 and may well have become extinct.[2]

The She story is of a completely different sort. The She, a highly Sinicized people scattered throughout much of central China, appear in Tang and later Chinese sources and have long attracted the attention of Western ethnographers. They have been considered basically Yao, by Chinese as well as Western scholars, but their language remained something of a mystery until the very recent appearance of a comparative study by Chen (1982). This linguist emphasizes the Yao (Mien) features in the language, which he places in the Yao division, but the limited material

that he presents indicates rather that She is a Miao language that has been deeply influenced by Yao (Yao-ized Miao), e.g., it shows the distinctive ka- (< *qa-) prefix with body part words (9.21), found only in Miao. An alternative view, supported by the presence of distinctive forms for such basic items as 'ear' and 'eye', is that She parallels Na-e as another early split from the Proto-Miao-Yao core.

3.0 Sources:

Ideally one would be able to compare Japanese and Ryukyuan forms directly with existing reconstructed Proto-Austro-Tai roots. The only source for such roots, however, is the Glossary of Benedict 1975, where they are included in an assemblage of Likely Cognate Sets. These have 'aged' considerably in the decade or so since they were put together, primarily as the result of the enormous expansion both in source materials and comparative research in all three families of Austro-Tai then under investigation. A revision is very much in order, therefore, and will be attempted in the pages that follow.

3.1 Austronesian sources:

Proto-Austronesian: primarily from the monumental work by Tsuchida (1976), which extends earlier findings by Dyen and other Austronesianists; some citations from Dyen and McFarland 1971, Dahl 1976, Blust 1980a. The indicated modifications in the cited forms involve transcriptions (see 3.5) and/or changes in the reconstructions (see text).

Proto-Malayo-Polynesian: primarily from the pioneer work by Dempwolff (1938), as modified by Dyen (see the analyses in Tsuchida 1976 and Dahl 1976), for cognate sets represented both in Dempwolff's 'Indonesian' as well as 'Melanesian' and/or 'Polynesian.' Some citations are from Dahl 1976 or 1980a, the latter labeled (2) = 'Proto-Malayo-Polynesian,' as opposed to (1) = 'Proto-Austronesian' (see diagram from Blust under 2.0).

Proto-Hesperonesian: primarily from Dempwolff 1938, as modified (above), for cognate sets represented only in Dempwolff's 'Indonesian.' Some citations are from Dahl 1976 or 1980a, the latter labeled (3) = 'Proto-Western Malayo-Polynesian' (see diagram under 2.0).

Proto-Oceanic: Grace 1969.

Southeastern Papua (Oceanic): Capell 1943.

Proto-Polynesian: Walsh and Biggs 1966, Biggs, Walsh, and Waqa 1970.

Proto-Philippine: Zorc 1978.

Philippine and North Philippine languages: McFarland 1977.

Proto-Manobor: Elkins 1974.

Tagalog: Institute of National Language 1945.

Chamic:

Old Cham: Aymonier and Cabaton 1906.
Huihui (Hainan): Ouyang and Zheng 1983a.

Formosan (general): Ogawa and Asai 1935, Ferrell 1969.

Proto-Atayalic: P. F-K. Li 1981.

Atayal: Ferrell 1967 (Ogawa), Egerod 1980, P. J-K. Li 1980 (an outstanding source for verb stems).

Proto-South Formosan: Tsuchida 1976.

Proto-Tsouic: Tsuchida 1976.

Proto-Rukai: P. J-K. Li 1977.

Paiwan: Ferrell 1982, Ho 1978.

Puyuma: Ting 1978, Tsuchida 1980.

Saisiyat: P. J-K. Li 1978a.

Kabalan: Moriguchi 1982, 1983.

3.2 Kadai sources:

Proto-Tai, Proto-Southern Tai, Proto-Central Tai, Proto-Northern Tai: from the superb handbook by F-K. Li (1977), which does not cite reconstructions as such but indicates reconstructions for the initials and rhymes, along with copious footnotes that often can be used to set up variants for Proto-Tai, Proto-S Tai, Proto-Central Tai, and/or Proto-Northern Tai.

Tai languages:

Ahom: Borua 1920.
Shan: Cushing 1914, Mix 1920.
Siamese: Pallegoix 1896.
Lao: Guignard 1912.
Black Tai: Diguet 1895.
White Tai: Minot 1940.
Tho: Diguet 1910.
Nung: Savina 1924.
Nung (Lungchow): F-K. Li 1940.
Dioi: Esquirol and Williatte 1908.
Yay: Gedney 1965.
Buyi: Nationalities Research Institute 1959.
Saek: Gedney ms.

Kam-Sui languages:

Kam: Liang 1980a.
Sui: Zhang 1980, F-K. Li 1965.
Mak: F-K. Li 1943, 1965.
T'en: F-K. Li 1965.
Maonan: Liang 1980b.
Mulao: Wang and Zheng 1980.

Kadai languages, other:

Lakkia: Anonymous 1959, Mao et al. 1982.
Be: Jeremaissen 1892, Haudricourt (Savina) 1965, Hashimoto 1980.
Li: Jeremaissen 1982, Savina 1931, Stübel 1937, L. Wang 1952,

Ouyang and Zheng 1980, 1983b; also (Cun Hua) Fu 1983.
Laqua: Bonifacy 1905, 1908, Lajonquière 1906.
Pupeo: Dang et al. 1972.
Laha: Dang et al. 1972.
Lati: Bonifacy 1906, Lajonquière 1906, Robert 1913.
Gelao: Bonifacy 1905, Clarke 1911, He 1983.

3.3 Miao-Yao sources:

Proto-Miao-Yao: from the pioneer work by Purnell 1970, with modifications involving transcriptions (see 3.5) and/or changes in the reconstructions (see text). Proto-Miao reconstructions based on F-S. Wang 1979 (below) are subsumed here.

Proto-Yao: Purnell 1970.

Proto-Miao: Purnell 1970; F-S. Wang 1979, which presents some 600 cognate sets represented in nine Miao dialects (one each from N. and E. Miao, seven from W. Miao). Both the initials and rhymes are grouped by categories, with reconstructions (as cited) only for the initials.

Bunu: Mao et al. 1982.

Cheng-feng (Kanao): Esquirol 1931.

Na-e (Pateng): Bonifacy 1905.

Northern Miao (Hunan: 18th century): Lombard-Salmon 1972.

She: Chen 1982.

White Miao: Heimbach 1966.

Yao:
Yu Mien:
Chiengrai: Lombard 1968.
Hsing-an: Mao et al. 1982.
Taipan: Savina 1926.

Kim Mun:
Haininh: Savina 1926.
Dzao Min: Mao et al. 1982.

3.4 Japanese-Ryukyuan sources:

Japanese (Jp.): Masuda 1974, Nelson 1974.

Old Japanese (OJ): Ōno et al. 1982, Martin 1979, Yoshitake 1934.

Ryukyuan dialects:
Shuri: Martin 1979, Chamberlain 1895.
Shodon: Martin 1979.
Yonaguni: Martin 1979.

3.5 Transcriptions:

General:
Postvelar: q, G, X (vl.), R (vd.), N.
Palatal: c, j, tś, dź, ś, ź, ń, y.
Alveolo-palatal: tš, dž, š, ž, ň.

Austronesian: The conventional symbols ʔ, ɣ, and ə are retained (in Austronesian sources often replaced by q, R, and e, respectively). Dempwolff's /j/ and /v/ are replaced by /y/ and /w/, respectively, his /l̥/ by /r/; also (ap. Dyen 1953) his medial and final /h/ by /ʔ/, his medial /ᵊ/ by /h/.

Japanese: /si, zi, ti, tu/ for shi, ji, chi, tsu; also /F/ (bilabial fricative) for f/h (see 7.0).

Old Japanese: ï, ë, and ö (see 6.0).

Reconstructions:
( ) optional feature, especially the optional nasal increment (see 7.30), e.g., P-Miao-Yao *(m)p for Purnell's *P.
[ ] provisional reconstruction.

*x/y *x varying with *y, as in a doublet formation.
[x,y] either *x or *y (indeterminate).
C consonant.
*C consonant cluster (indeterminate).
*C_i consonant (indeterminate).
*C_p consonant (palatalizing).
*C_s consonant (spirant).
*C_t consonant (stop).
*C_w consonant (labializing).
V vowel.
*V_i vowel (indeterminate).
*V_p vowel (palatalizing).
*V_w vowel (labializing).

4.0 Approach:

This study involves an ultra-conservative, reductionist approach that involves a basic four-language comparison: Japanese/Old Japanese (occasionally Ryukyuan or even Proto-Japanese-Ryukyuan) with Proto-Austronesian, Proto-Kadai and/or Proto-Miao-Yao. Correspondences that can be fitted into a solid over-all phonological framework are accepted as core cognate sets and these are presented in some detail in the Glossary, with Note(s) as indicated. Other apparent correspondences, each involving a 'problem' of sorts, are included in the text for heuristic purposes; it is anticipated that a good many of these, perhaps even a majority, will in time be authenticated.

The reconstructions presented in the Glossary are at three different levels: Proto-Austro-Japanese, Proto-Austro-Kadai, and Proto-Austro-Tai, depending upon the presence or absence of Proto-Kadai and/or Proto-Miao-Yao cognates in any given cognate set. Inasmuch as the mainland families are still poorly known, it is likely that many of the present 'Proto-Austro-Japanese' etyma will in time become 'Proto-Austro-Kadai' or 'Proto-Austro-Tai' etyma. For each cognate set the main reconstruction is followed by Proto-Austronesian, Proto-Austro-Kadai, and/or Proto-Miao-Yao reconstructions, with a hyphen, i.e., minus (-) employed where the set is not fully represented: Proto-Austronesian- if only Proto-Hesperonesian/Proto-Malayo-Polynesian or Formosan (see 2.0); Proto-Kadai- if only Tai/Kam-Sui, etc., or Gelao/Lati (see 2.1); Proto-Miao-Yao- if only Miao or Yao (see 2.2). The hyphen is also used at lower levels, e.g., Proto-Southern Tai- if only Siamese/Lao/Black Tai/White Tai or Shan/Khamti/Ahom (the main dichotomy in the Southern Tai group).

In the presentation of phonology, the order is: morpheme shape - vowels - consonants - accents. As will be seen, this involves going from the least difficult through the moderately difficult to the most difficult aspects of the subject.

5.0 Morpheme shapes (syllables):

Apart from Japanese-Ryukyuan, the evidence for the shapes of Proto-Austro-Tai morphemes is largely that supplied by the Austronesian languages. The Proto-Austronesian canonical shape clearly was disyllabic: CVCV(C), with or without nasal increment (often optional) at the C_1 and C_2, but not C_3, slots (cf. Dahl 1976:10–11), e.g., HAND/: P-Austronesian *ḻima, FOUR: P-Austronesian *śəpat, SPREAD/: P-Austronesian *sa(m)paγ. A consonant cluster, *C, could fill the C_1 and C_2, but not the C_3, slots. The above formula assigns an automatic glottal stop in the C_1 slot of (otherwise) vowel-initial roots although it does not appear to have been phonemic (contrastive with [0]) in this position; without this convention, the formula becomes (C)VCV(C).

The only really common morpheme shape in Proto-Austronesian apart from the above was that of the reduplicated monosyllable: $CV(C)^2$, many if not most of which represent an original reduplicated SYL-2, e.g., SEIZE (WITH HANDS ~ TEETH)/: P-Austronesian *caŋkup > *caŋkupkup > (ŋ)kup(ŋ)kup (optional nasal increment). Trisyllables were uncommon but not so rare as generally believed, e.g., P-Austronesian *ts_{12}urambi 'wing of house' (see below), *[d.]awasa 'two' (see 7.6). Monosyllabic roots, on the other hand, appear to have been truly rare: GRANDFATHER/GRANDCHILD/: P-Austronesian *(m)pu.

The present-day Kadai and Miao-Yao languages have all long since reduced to monosyllabic morphemes but Proto-Kadai, and very likely Proto-Miao-Yao as well, were at least in part disyllabic, with some evidence even for a rare trisyllabic form (see 7.6 for 'two' root). In most cases it is difficult, if not entirely impossible, to determine whether or not a given root had been reduced to a monosyllable at the Proto-Kadai level, e.g., in the above-cited SEIZE/ root the Proto-Kadai-derivative has been reconstructed *kuup < *kupkup, with the latter a viable alternative. In

certain roots the variation within Kadai (more rarely, within Miao-Yao) is such that a disyllabic root has to be set up at the proto-level, e.g., BEAR: P-Kadai *kumay^{A}, with the several Kadai cognates reflecting /m/, /u/, /ay/, and even /k/ (Lk. kũ:i^{A}). The evidence from these mainland families is of limited value re the problem at hand, of course, but at least one can make the general statement that it does not run counter to the indications from Austronesian.

5.1 Canonical reduction:

Two syllables are canonical in Austronesian, as long ago recognized by R. Brandstetter (1915), a pioneer Austronesianist, who wrote of a 'drive towards disyllables' (Zweisilbigkeitstrieb) in the family. Blust (1977), who describes this as the 'pan-AN [Austronesian] drift towards disyllabism', has made extensive use of this feature in his analysis of *-i suffixed verbal forms in Oceanic (see 5.23 and 9.5). It is manifested in the widespread tendency to maintain disyllabic forms at the /2/ canonical length in the face of reduplication or other additive morphological change, e.g., in the SEIZE/ root (above) and the end product remained disyllabic: *caŋkup > (ŋ)kup(ŋ)kup; cf. also HAIR/: P-Hesperonesian *t'abut ~ *d'ambut ~ *ra(m)but (the infixed -r- derivative). The feature is variable, e.g., within Atayalic the (standard) Squliq dialect of Atayal may be said to 'specialize' in it; cf. P-Austronesian *ki[t.]a 'see' > P-Atayalic *kita? > Sq. kita? ~ m-ita? (see 9.3 for infixed -um-). Trisyllabic roots also are affected by canonical reduction, at times yielding doublets, cf. the following Proto-Austro-Kadai root (Benedict 1975:367), illustrative of the three kinds of canonical reduction:

canonical reduction-right: through elision of the final syllable (on the right)

canonical reduction-left: through elision of the initial syllable (on the left)

canonical reduction-center: through elision of a medial syllable (in the center)

P-Austro-Kadai *[ts, tš]urambi: P-Hesperonesian *t′$_{12}$urambi 'wing of house' ~ *ambi 'addition', through canonical reduction-left; P-Tai *suam^{B} 'room/compartment', from *[ts,tš,tś]urambi, through canonical reduction-right followed by canonical reduction-center.

As indicated by this last example, more than one kind of canonical reduction can be involved in a single development, especially in the monosyllabizing languages of the mainland. The Squliq dialect also 'specializes' in the reduction of trisyllabics, again with canonical reduction-left, cf. BAMBOO: P-Atayalic *batakan > Squliq takan.

Although /2/ is the canonical syllable count in Austronesian generally, there are exceptionally languages in the family in which the count is /21/ (= 2 ~ 1) and some note of these should be taken in view of the parallel development in Japanese. The /21/ count is characteristic of the Chamic languages of southcentral Vietnam, which have been effected by a southeast Asian areal trend towards monosyllabism, associated to a considerable degree with tonality. The Sino-Tibetan languages are monosyllabic and tonal ab origine and their easternmost representative, Chinese, appears to have played the key role in transmitting these features to both adjacent language stocks: Austro-Tai (all Kadai and Miao-Yao languages both monosyllabic and tonal) and Austroasiatic (Vietnamese both monosyllabic and tonal, Khmu et al. with tonal systems, monosyllabic trends in Jeh-Hal$_a$ng and other Mon-Khmer groups) (see Benedict 1975:151–2). The monosyllabizing stratagems vary, typically of the canonical reduction-center type in the case of the latter, with loss of weakly stressed V_1: Hal$_a$ng kölap 'flying termite', Jeh klap; Hal$_a$ng pöhaŋ 'roast', Jeh phaŋ; Hal$_a$ng hön$_a$m 'year', Jeh hn$_a$m. This stratagem has also been used extensively in Kadai and Miao-Yao, along with canonical reduction-left (typical of Kadai) and canonical reduction-right (typical of Miao-Yao) resulting in a number of 'split cognates' such as the following:

EYE: P-Austro-Tai *mapra > P-Tai *praa^{A} ~ P-Miao-Yao *may^{C}.

Lee (1974) has studied the canonical reduction process in Chamic in great detail, comparing it especially with that found in Mon-Khmer,

citing Jeh-Hal$_a$ng forms such as the above. The Chamic development is complicated by secondary glottalization, e.g., P-Hesperonesian *buhuk (< *busuk - see Note on HAIR[1]) 'hair' > Proto-Chamic *?bu?, a feature linked by Blust (1980b) to nasal increments (see discussion in 7.3.0). Chamic also makes use of canonical reduction-left, as in the Old Cham doublet: bulan ~ lan < P-Hesperonesian *bulan 'moon' and (rarely) canonical reduction-right: P-Chamic *jāl 'fishnet'< P-Hesperonesian *zala? (Lee cit.; Dempwolff 1938 has *d'ala, listed as an old loan in Hesperonesian); P-Chamic *pitu? 'star' < P-Hesperonesian *bitu?ən (but the -ən may well represent an old suffix - see STAR/ - Note).

The Chamic 'drive towards monosyllabism' has produced an almost completely monosyllabic language in Huihui, spoken by an early (probably 13th century) Chamic 'colony' in southern Hainan (Benedict 1983c). Direct Chinese influence has undoubtedly played a role here as well as in the development of a complete tonal system in Huihui, which is systematically related to earlier (Proto-Chamic) segmental features, e.g., P-Chamic *?bu? 'hair' > Huihui ?bu^4, with transphonologization of the final *-? into tone 4; P-Chamic *bulan 'moon' > Huihui phian^3, with canonical reduction-center (contrast the canonical reduction-left in Old Cham, above) and regular aspiration of the voiced stop with tone 3. The common stratagem in Huihui, along with canonical reduction-center, is canonical reduction-left, with numerous forms produced through apheresis.

The Chamic and, more specifically, the Huihui syllable reduction appears to have been influenced, either directly or indirectly, by the monosyllabic Chinese language. It is not necessary, however, to posit an influence of this kind - an important point with reference to the reduction found in Japanese. This conclusion is reached when one considers Canala, an Oceanic language spoken in New Caledonia (Grace 1974). Oceanic (PO) roots commonly take the shape CVCV, with loss (> [0]) of final consonant where not 'protected' by a suffix. Canala frequently reduces these through canonical reduction-right to the shape CV, e.g., P-Malayo-Polynesian *qata > Canala ka 'enemy' (see OUTSIDER/). In Canala, therefore, the canonical count is also /21/, as in Old Cham.

5.20 Japanese canonical reduction:

It is clear from the outset that for Japanese, given the absence of consonant clusters, the main pattern of reduction would have to take the form of canonical reduction-left or canonical reduction-right. There are Austro-Tai and Austronesian parallels, as shown above, for both the canonical reduction-left pattern (Kadai, Chamic) and the canonical reduction-right pattern (Miao-Yao, Canala). If one considers only the Austronesian examples, Canala provides the obvious parallel in phonological development. This Oceanic language, like others in the group, maintains original final consonants only where 'protected' by a suffix. As shown below (7.13, 7.4, 7.7), this is precisely what has occurred in Japanese, sharply contrasting with the Chamic development, in which final stops are generally maintained. On this basis, then, one might anticipate canonical reduction-right as the basic pattern for Japanese. This is, indeed, the case, with complications arising from lengthened and affixed forms, as shown below.

5.21 Japanese canonical reduction - disyllabic roots:

The basic canonical reduction-right pattern of Japanese is best reflected in roots that have not been secondarily lengthened. The anticipated doublets are well represented in this group: BREAST, GREEN/ (with semantic differentiation), HILL/, LEAF, MOTHER/, SPIT/, and there is even one pair of 'split cognates': GOD/ (cf. the pair for EYE cited above in 5.1), with the canonical reduction-left member found only in a compound. These doublet forms attest to canonical reduction-right as continuing well into the late pre-Old Japanese period of the language.

BEAT/: *pakpak > Fa
BREAST: tšitši > titi ~ ti
EARTH/: *(m)plalaq > ta
FEATHER/: *ɬawi > ya

FOUR: *śəpat > yö-
GOD/: *piḷi > Fi ~ -ri
GREEN/: *(n)Cama > nama ~ na
HAND/: * ḷima > i- (< *yi-)
HILL/: *po(ŋ)krak > woka ~ wo
HIND-PART/: *(m)po(ŋ)kor > wo
LEAF: *paGpaG > Fappa ~ Fa
MOTHER/: *papa > FaFa ~ Fa
SPIT/: *tśu(m)paq > tuba ~ tu
TOOTH/: *gigi > ki
TUSK/: *walis > wā (Rk.)
  > *wilis > wi (OJ)
WHO: *tśayi > ta

The only exception here is supplied by NEST: *lisuk > su, where the development has been *lisuk > *isu, with loss of initial i-, as often seen in the early period in Japanese (Miller 1967:292), probably as a 'weak' phonological feature (cf. the 'weak' *i involved in canonical reduction in Kadai [Benedict 1975:151–2]). Apart from this, however, canonical reduction-left seems never to have taken place in simple (unlengthened, unaffixed) disyllabic roots. Thus, under TOOTH/, Jp. ki is not to be derived from the underlying P-Austro-Japanese *[t,C]agi but rather from the common reduplicated form: *gigi, as in the above listing. In the following pair of roots the final syllable is maintained through loss of medial *h (> Jp. [0]):

FEMALE/: *(m)bəhi > *-məi > -mi
STEAM/: *ḷihul > *yiu > yu

5.22 Japanese canonical reduction - lengthened disyllabic roots:

Proto-Austro-Tai final *-w and *-y were vocalized at an early stage in the development of Japanese, with replacement by *-u and *-i respectively. The resulting vowel clusters were eventually levelled off: *ai

> ë/e, *ui > ï/i, *aw ~ *əw > *ou > o (see 6.6 - Table 2), with the earlier *a (less often *u) before *i maintained in compounds. Before this levelling occurred, however, the clusters were truly disyllabic, thereby lengthening the roots involved to trisyllabics, e.g., FIRE: *śa(m)puy > *śa(m)pui. With roots of this kind the 'drive towards disyllabism' became simply a drive to maintain the disyllabic shape of the original, as in Austronesian (see 5.1). In the case of *ai, which was readily 'separable', the basic canonical reduction-right pattern prevailed, with loss of the final syllable: *-i:

BEAR: *kru(m)bay > *kumai > kuma
FEMALE/: *(m)b-n-ahi > *-minai > -mina
RICE: *krumay > *kumai > kuma
(with destressing) > *kömai > köme
SAND: *xunay > *sunai > suna

The maintenance of the lengthened trisyllabic shape in the doublet for RICE was apparently motivated by the destressed vowel (6.5), which counted for only half a syllable, making the total only 2.5 rather than 3.0. In a third root with P-Austro-Tai final *-ay, the full lengthened form was retained:

DIE/: P-Austro-Tai *pa-play > *Fatai > Fate

The key factor here surely was the fact that SYL-1 was prefixial in origin, apparently serving a morphological function until a relatively late (pre-Old Japanese) stage in the development of the language.

In roots with the less 'separable' *ui and the 'inseparable'*ou clusters, only the initial syllable could be lost, making for canonical reduction-left in these cases:

FIRE: *śa(m)puy > *Fui > Fï
DOOR: *pi(n)təw > *tou > to
TOP: *babaw > *Fou > Fo

Secondary lengthening of roots also occurred in Japanese as the result of replacement of final dentals by *-i, specifically here of final *-s or *-z (7.61, 7.62). In the three cognate sets involved, the reduction has been of canonical reduction-left rather than canonical reduction-right type, i.e., the clusters were maintained:

HAIR[I]: *bukas > *kai > kë
ROOT: *(w)a(ŋ)kaz > *nai > ne
WINNOW/: *ta(m)pus > *mui > mï

Still another source of root-lengthening *-i is supplied by the nasal dental: final *-n (7.42). It would appear that this final merged with final *-y at an early period inasmuch as the *-i was consistently lost (except for one doublet form), paralleling the development in BEAR and RICE (above). In three of the six roots involved, the *-i was lost early, leaving a disyllabic form. In the other three roots, however, the *-i was first maintained, with the anticipated canonical reduction-left, to be followed at a later stage by loss of the *-i through canonical reduction-right, as attested by the doublet for NAME:

FISH/: *śikan > *yikai > ika
HOLE/: *[q,ʔ]anan > *anai > ana
YOUNG/: *[q,ʔ]oton > *otoi > oto

HOUSE: *[d,dz]aγan > *yai > ya
NAME: *ʔa(ń)ja(-n) > *nai > na ~ -ne
TOOTH: *(N)Gi(m)pan > *Fai > Fa

The reconstruction of the final for NAME is uncertain (see Glossary), with final *-n and even suffixed *-i both alternative possibilities; in any event, it is probable that either suffix (if not root-final *-n) had been incorporated into the root at an early (pre-OJ) period. In FISH/, a suffixed *-n appears to have been incorporated at an early period (see Note on this entry).

A final source of root-lengthening *-i in Japanese is furnished by final *-ŋ through assimilation to *-n in roots with initial *t- (7.44). Two of these roots show reduction, of the anticipated canonical reduction-left type:

BORE/: *tə(m)buŋ > *toFui > toFï ~ Fï
GRIP/: *[t,C]aŋ[t,C]aŋ > *tai > te

5.23 Japanese canonical reduction - reduplicated or suffixed disyllabic roots:

FLESH: *śətsitsi ~ *tsitsi > sisi
HUNDRED: *[γ,R]i(m)bəw > momo ~ -bo
THIGH: *[q,ʔ]u(m)pəw > momo

The reduction in these partially reduplicated roots had of necessity to take the form canonical reduction-left. This is also true of suffixed forms. Cf. the following:

BEAT/: *pakpak > Fag-i
BLOW (WITH MOUTH): *[ts,tš,tś]ibuk > Fuk-i
BOIL/: *luwag > wak-i
CALL (ANIMAL)/: *ŋakŋak > nak-i
COOK/: *talak > yak-i
CUT (OFF, IN TWO): *kətatš > tat-i
DRINK: *[q,ʔ]inom > nöm-i
FILL/: *(m)pəl(m)pəl̥ > mör-i
GUM (OF TREE)/: *C_{ts}ayaŋ > yan-i
HARD: *makatš > kat-a
HEAD (OF LINEAGE)/: *da[t,C]u > *tu-i > *tï > ti
HOLD/: *ramoc > mot-i
MOUNTAIN/: *l̥utuk > tuk-a
POUND: *truktruk > tuk-i
SEIZE (WITH HANDS ~ TEETH)/: *(ŋ)kup(ŋkup > kuF-i

SOUND: *šuni > *ni-a > ne
SPREAD/: *sa(m)paR > Far-i ~ Far-a
SQUIRT/: *(m)piR(m)piR > Fir-i
STITCH/: *ra(ń)jup > nuF-i
SUCK: *(n)tsup(n)tsup > suF-i
THRUST/: *(ń)tśuk(ń)tśuk > tuk-i

In SPREAD/, with both -i (verbal) and -a (nominalizing) suffixes, canonical reduction-left affected both forms. In another root of this kind only the *-a form was affected:

WIDE OPEN/: *labak > abak-i
> Fak-a

The maximum variation is shown by the following root, which has a canonical reduction-right doublet in the unsuffixed root (listed under 5.21) along with a possible canonical reduction-left doublet in the -i suffixed derivative:

SPIT/: *tśu(m)paq > tuba ~ tu
> tubak-i (~ Fak-i)

The parallelism with the Oceanic suffixed -i verbal forms (9.5), where 'restoration of optimal canonical shape' (Blust 1977) has led to haplology, is startling, e.g., SUCK: *(n)tsup(n)tsup > Jp. suF-i, paralleling the allofamic *tšəptšəp > Nggela sop-i.

5.24 Japanese canonical reduction - prefixed disyllabic roots:

Apart from special cases (9.2), Japanese has retained only the widespread *qa- (> a-) prefix characteristically found with body part words. In the one cognate set available, reduction did not take place:

RIBS: *baraŋ > abara (< *a-bara)

Although the comparative material is at present limited to this one cognate set, all the likely candidates in the language are (basically) trisyllabic, indicating that canonical reduction was normally precluded with this prefix: abura 'fat/oil', ase (< *asai) 'sweat', atama 'head', ato < OJ atwo = ato (< *atou) 'back'. See also 5.25 for a special case.

5.25 Japanese canonical reduction - prefixed and lengthened disyllabic root:

It might be anticipated that a root of this kind would be a 'problem' for a language with /21/ canonical syllable count and this indeed proved to be the case here. The root itself was subject to lengthening because of the final *-boc, regularly yielding -wo (7.12), realized as *-wou (6.6), thus converting the root into a trisyllabic. With the addition of the 'body part' *qa- prefix the syllable count would have gone to a most uncanonical /4/. Two early lines of development ensued, the Old Japanese line without the prefix, the Japanese line with the prefix along with 'split' allofams:

HAIR/: *(qa-)(n)[ts,tš]a(m)boc > OJ sawo ~ *sa(w)o > so > Jp. asa ~ *wo > o

5.26 Japanese canonical reduction - trisyllabic roots:

The plain trisyllabic roots, without lengthening (5.27) or suffixation (5.28), all underwent reduction in Japanese of one sort or another. In one cognate set the root was converted into a disyllabic through regular loss of *ʔ (7.12):

NIGHT/: [γ,R]abiʔi > *yabii > yöFi (destressed form)

In another root a secondary vowel cluster *ui came about through the regular *l /u > [0] shift (7.71), with subsequent loss of the final syllable (*ai and *ui occur only in final position):

YELLOW: *kulijaŋ > *kui > *kï > ki

A third root shows reduplication of the first syllable, matching that found in Austronesian (Atayal), with loss of the final syllable (see Note on entry for the standard < *u- prefixed forms).

BAIT: *śa-śapa > yosa (dial.) < *yösa (destressed form)

Finally, a fourth trisyllabic form, with incorporated *-n- infix, yielded an intermediate final *ai, which was then subjected to canonical reduction-right, paralleling RICE: *krumay > kuma et al. (5.22):

FEMALE/: *(m)b-n-ahi > *mbinai > -mina

5.27 Japanese canonical reduction - lengthened trisyllabic roots:

BAMBOO: *batakan > *takai > takë
STAR/: *bi(n)tuqun > *tukui > tukï

These strikingly parallel cognate sets both made use of canonical reduction-left, as in lengthened disyllabic roots (5.22). It would appear that the secondary lengthening converted the syllable count to only 3.5 rather than a full 4.0, hence the simple division into /2/ and /2/ did not take place (contrast 5.28).

5.28 Japanese canonical reduction - suffixed trisyllabic root:

In the single cognate set available here, with a full syllabic (-a) suffix, the secondary /4/ syllable count was broken up into /2/ and /2/, reflecting the basic disyllabic drive, with preservation only of the final segment with the suffix:

SHOULDER: *baḷika[t,c] > kat-a

5.29 Japanese canonical reduction - summary:

As can be seen from the foregoing, one cannot at this time say *why* certain roots were subject to canonical reduction in Japanese, while others of the same shape were not, but one can say *how*. The options in general are limited and the regularity that obtains is comparable to that found in Austronesian itself, even within the tightly knit Chamic group (Lee 1974). Curiously enough, of the various morpheme shapes sufficiently well represented in the comparative material to allow for such conclusions, only the final (or suffixed) *-n shape invariably shows canonical reduction of one sort or another, whether in disyllabic (HOLE/, HOUSE, NAME, TOOTH - see 5.22) or trisyllabic (BAMBOO, STAR/ - see 5.27) roots; this does not hold for forms with suffixed *-an (see DREAM).

The basic pattern of reduction, as represented by plain (unlengthened/unaffixed) disyllabic roots, is canonical reduction-right, paralleling the pattern found in Canala (Oceanic), with like option not to reduce, making the canonical syllable count /21/. In roots that are lengthened or suffixed, the /2/ count is characteristically maintained through canonical reduction-left, with some canonical reduction-right where the vowel cluster *ai (occurring only as final) is involved. This general pattern also holds for the few trisyllabic roots represented in the comparative material, none maintained at full /3/ syllable count. The scant material available on prefixed *a- (< *qa-) roots suggests that these were maintained without canonical reduction unless secondarily lengthened.

5.3 Canonical lengthening:

A 'drive' or 'drift' towards disyllabism (5.1) can be expected on occasion to involve lengthening of a rare monosyllabic root. This apparently occurred in the core root for EAT: P-Austro-Tai *ka?, largely replaced in Austronesian and probably also in Kadai by the lengthened form *ka?ən, with incorporation of the goal-focus-marker *-ən (see

Glossary). One would not anticipate that Japanese, with /21/ canonical syllable count, would reflect canonical lengthening; in the above root it has only *ma- prefixed (maka-) and *-i suffixed (kë < *kai) derivatives.

6.0 Japanese vocalic reflexes:

The five-vowel /a i u e o/ system of the modern Tokyo Standard language (Jp.) is descended from an eight-vowel /a i ï u e ë o ö/ system of Old Japanese (OJ), with merging of /ï/ with /i/, /ë/ with /e/, and /ö/ with /o/. The merging process had already begun at the Old Japanese level, notably /ö/ with /o/ in the early, non-standard Azuma or 'Eastern' dialect (Miller 1967:298–9). Even in Old Japanese, moreover, the key contrasts do not occur in all positions:

After labials (except /m/): /F b w/: only /o/
After dentals: /t d s z n r/: only /i/ and /e/
After /y/ (does not occur before /i/): only /e/
Zero (vocalic) initial: no contrasts

The above is the commonly accepted scheme for Old Japanese vowels, incorporated in the work of Yoshitake as well as Ōno et al. (1982) and Martin (1979) (see 3.4) and followed in this study. It is a 'minimal' scheme, as opposed to others that attempt to set up additional contrasts (see Miller 1967:281–2), but it has the advantage of providing a secure basis for comparative work. The nature of the vowels represented (in the most commonly used transcription) by /ï/, /ë/, and /ö/ has been debated interminably for the past several decades, with specialists presenting a variety of opinions, e.g., in the pioneer work by Yoshitake these vowels are analyzed as lowered: /ɪ, ɛ, ɔ/. Fortunately enough, one can establish the basic Austro-Tai correspondences for all eight vowels quite independently of any problem re their precise phonological nature in Old Japanese.

An additional complication must be noted: even in positions of contrast the data at times are insufficient to determine which member of

the contrasting pair is involved, hence a simple /i/, /e/, or /o/ can be misleading. To remedy this, the notation (but not the analysis) employed in Martin 1979 is used where these vowels have been established (contrasting with /ï/, /ë/, and /ö/, respectively)(y- and w- not initial):

yi = i ye = e wo = o

6.1 Vocalic correspondences (non-glide):

A six-vowel */a i u e ə o/ system has been reconstructed for Proto-Austro-Tai (see Benedict 1975:178–83), yielding a four-vowel */a i u ə/ system in Proto-Austronesian through merging of the front/back high and mid-high vowels. Japanese resembles Tai in merging *o with *ə rather than with *u but, unlike Tai, has also merged *e with *i. The correspondences for these three vowel systems are tabulated below. Before the *-y and *-w glides, always in final position (apart from reduplicated forms), the Japanese reflexes are distinctive; these are considered in a separate section (6.6).

Table 1. Austronesian/Tai/Japanese vocalic correspondences

P-Austro-Tai	P-Austronesian	P-Tai	OJ
*a	*a	*a	a
*i	*i	*i	i = yi (Martin 1979)
*u	*u	*u	u
*e	*i	*e	i
*ə	*ə	*o	ö = o̲ (Martin 1979)
*o	*u	*o	ö

NOTES

1. Proto-Austro-Tai *e, *ə, and *o in medial position only.

2. It is possible that Proto-Austronesian maintained *e and/or *o in rare instances. Blust (1980a:23–4) even goes so far as to state that there is 'some reason to believe' that both vowels, although 'relatively rare', are to be reconstructed for Proto-Hesperonesian and perhaps even Proto-Malayo-Polynesian. The best evidence along these lines uncovered to date is furnished by the root SHORT/, with the indicated *e for Proto-Hesperonesian corresponding to P-Tai *e. In any event, the Japanese correspondence here is /i/, on the basis of this one cognate set (the vowel clearly is marginal in Austro-Tai). The corresponding back mid-high vowel *o, by way of contrast, plays a prominent role in Austro-Tai and is well marked off from *u both in Tai and Japanese.

3. P-Austro-Tai *ə appears to have been maintained at the Proto-Kadai level (see SIX), as indicated also by the evidence for reconstructing P-Kadai *-əw (6.6). At the later P-Tai level, however, as represented in the above table, the vowel probably had merged with *o in most if not all positions.[3]

4. The P-Tai vowels in the above table are from the scheme presented in Benedict 1975:181, which makes primary use of the contrast (in medial position only) between short (single) vowels and long vowels (geminate clusters). This scheme has been favored by most Tai specialists, e.g., it is supported in the detailed analysis by Strecker (1983), and it certainly makes the most 'sense' historically. The Tai *Handbook* by F-K. Li (1977) employs a radically different system based on qualitative rather than quantitative (length) distinctions, e.g., *a is reinterpreted as *ɔ, and *aa as *a. As shown in Benedict 1975, however, the correspondence of the former is to P-Austro-Tai *a, the latter to P-Austro-Tai *a - a (as V_1 - V_2), hence the regular length (better: geminate cluster) analysis greatly simplifies comparative work in this difficult field.

5. In the Miao-Yao family generally, although not yet demonstrated at the Proto-Miao-Yao level, P-Austro-Tai *a is maintained while the remaining vowels are regularly lowered: *i > /e/ ~ (final) /ei/, *u > /o/ ~ (final) /ou/, *o > /ə/, with additional evidence for *ə > /o/, as in Tai and Japanese.

6. The vocalic systems of Tai and other Kadai languages, also to a lesser degree those of the Miao-Yao languages, have become exceedingly complex, e.g., for P-Tai the *Handbook* (Li 1977) sets up no fewer than 61 vocalic nuclei, including triple clusters such as *uai (as distinct from *[u with sub non-syllabic arc]əi)! Most of this complexity has come about as the result of 'vocalic transfer', or the movement into or effect upon SYL-2 of V_1 in the course of monosyllabization, ordinarily through canonical reduction-left. The vocalic transfer factor has played a much smaller role in Miao-Yao, often with different results, notably the maintaining of vocalic height, e.g., *u - u > /u/, *o - o > /o/. As shown by the writer (1979a), this is a Southeast Asian areal feature, appearing also in Chamic (Austronesian family) and Mon-Khmer. Fortunately for the comparativist, it does not seem to have played any role in Japanese.

6.2 V_1 - V_2 patterns:

As in Austronesian (and Austro-Tai generally), /a/ is the most prominent vowel and *a - a is by far the most common V_1 - V_2 pattern; cf. the following examples:

*a - a
BIND/: P-Austro-Kadai *[t,C]a(m)ba[t,c] > taba
BODY: P-Austro-Kadai *ba(n)traŋ > Fada
SHALLOW: P-Austro-Japanese *[q,ʔ]atsa[t,c] > asa-
SEA: P-Austro-Japanese *wacal > wata

Patterns involving *a with *i or *u, while much less common than the above, are all represented by half a dozen or more examples; cf. the following:

*a - i
BOARD/: P-Austro-Japanese /*bali[γ,R] > Fari
SHELL: P-Austro-Japanese *kapi[ts,tš,tś] > kaFi

*a - u	BREAK/: P-Austro-Japanese *rapuq > yabuk-i
	ROUND: P-Austro-Kadai *(m)baḷuR > maru
*i - a	ABOVE/: P-Austro-Kadai *ki(n)da > kita
	OPPOSITE SHORE/: P-Austro-Japanese *si(m)-pa[r,R] > sima
*u - a	RECITE/: P-Austro-Japanese *[q,ʔ]ucap > utaF-i
	TWO: P-Austro-Japanese *putśa > Futa-

A third group of patterns, with *i and/or *u without *a, are all somewhat less common than the above. Cf. the following:

*i - i:	BORE/: P-Austro-Japanese *girik > kiri
*i - u:	JUICE/: P-Austro-Japanese *(m)bidžuq > midu
*u - i:	BACK/: P-Austro-Japanese *huzi > usi-ro
*u - u:	MORTAR: P-Austro-Japanese lutsuŋ > usu

The *i - i pattern also appears in the one cognate set that involves P-Austro-Tai *e - e:

*e - e	SHORT/: P-Austro-Kadai *(m)pe(n)dlek > mizik-a

As indicated above (Note 1 to Table 1), the three mid-high vowels reconstructed for Proto-Austro-Tai: */e ə o/ differ from the high/low vowels in occurring only as medials, with *e distinctly marginal. The fact (Table 1) that OJ ö (> Jp. o) reflects P-Austro-Tai *ə as well as *o creates something of a problem on occasion inasmuch as in Proto-Austronesian (perhaps also Proto-Austro-Tai) the former serves as a 'destressed' vowel (6.4) as well as an ordinary root vowel. Where the pattern is *o - o or *ə - ə there is no problem, of course, and there are a number of cognate sets of this kind. Cf. the following:

*o - o:	NOISE/: *qo(n)tot > ötö
	PENIS/: *bo[t,C]ok > Fotö

*ə - ə: CUT (MEAT)/: *kəRəc > körö-s-i

Disyllabic roots with *o in SYL-2 and HIGH/LOW vowel in SYL-1 present no difficulty, either, since destressing does not ordinarily occur in this position (6.4). This is an uncommon pattern but does appear in three cognate sets (no examples of *u - o, perhaps a non-canonical pattern):

*a - o: CHIN: P-Austro-Japanese *dza(ŋ)go[t,c] > ago
HAIR/: P-Austro-Tai *(qa-)(n)tsa(m)boc > sawo
*i - o: ONE/: P-Austro-Japanese *pitroŋ > Fitö

Additionally, roots of an opposite pattern, with *ə in SYL-1, can also be reconstructed without difficulty:

*ə - u: SWELLING: P-Austro-Tai *kə(m)buŋ > kobu

The problem is one of ambiguity and arises in cognate sets for which Proto-Austronesian has *u and Jp. /o/ in SYL-1. Simply stated, the problem is: does the /o/ stand for an original *o (> P-Austronesian *u) root vowel or for the destressed (in Japanese) vowel? Here pattern considerations take over, with the *u reconstruction to be preferred (> destressed in Japanese), as in FLEA, SPITTLE/, STAR, YEAR, except where other factors point to an original *o in SYL-1 (HILL/, SNAKE), a far less common pattern.

6.3 Vocalic assimilation/dissimilation:

One would have to assume, of course, that vocalic assimilation has occurred from time to time in Japanese, as in other languages. The kindest view that one can take of a 'Millerism' such as OJ isa 'whale : P-Austronesian *it'i 'flesh, meat' (cited in 1) is that the author had something of the sort in mind. Similarly, the study by Kawamoto (see 1) is studded with comparabilia of this kind. Comparativists tend to accumulate 'look-alikes' in large numbers but, in the absence of an established

pattern of assimilation, they can hardly be used to demonstrate basic genetic relationships. This is especially the case when dealing with Old Japanese/Japanese, where the vowels carry so much of the discriminative burden.

The rule adopted in the present study is to exclude sets of this kind with the following exceptions:

(1) A parallel assimilation is attested elsewhere in Austro-Tai and thus is reconstructible at an early level: DREAM (widespread in Austronesian, also found in Miao-Yao), HAIR/ (widespread in Austro-Tai), MORNING/ (Formosan), STAR (Polynesian and Miao-Yao), WILDERNESS (Hesperonesian).

(2) A doublet reflecting the unassimilated vowel must be reconstructed for Proto-Japanese-Ryukyuan (TUSK/).

Japanese shows clear evidence of /i/ ~ /u/ assimilation/dissimila-' tion in contiguity with labial consonants, e.g., OJ imë, Jp. yume 'dream' (see (1), above); OJ umo, Jp. imo 'edible tuber' (see FIELD (DRY)/); perhaps also mune 'breast' ~ mine 'peak' (see PEAK/). Only one such root has been included in the absence of direct evidence in Old Japanese/Japanese, in part because of the supporting Ryukyuan evidence (see SNAIL/).

6.4 The destressed vowel:

The vowels of Austronesian are so simple, and the correspondences in general so regular, that specialists in that field have tended to ignore them in order to devote all their attention to the complex consonantal system. As pointed out above, the *ə vowel can be a primary root vowel although it occurs only in medial position. It is usually found in SYL-1, where it often replaces the basic *a, *i, or *u of the syllable, as retained in one or more cognates. It is the Malay *p*epet vowel, often transcribed /e/, connected with 'weak stress' or 'destress', comparable with the familiar 'schwa vowel' of linguists. It is represented in the various Austronesian languages by a bewilderingly large number of vowels, with correspondences at times virtually impossible to establish, especially in the

Philippines, e.g., Tagalog usually has -i- as a reflex but also often either -a- or -u-, much of the time without any discernible conditioning factor(s).

An important consequence of this phenomenon in Austronesian is the large number of doublets that have been reconstructed at early levels, e.g., P-Hesperonesian/P-Malayo-Polynesian *balut ~ *bəlut ~ *bilit ~ *bəlit 'roll, wind', *pu[t.]ik ~ *pə[t.]ik 'pluck off', *ka(m)pit ~ *kə(m)pit 'hold together', *ka(m)baŋ ~ *kə(m)baŋ 'to be inflated'. SYL-1 is the regularly affected syllable, SYL-2 rarely so (see below). The destress doublet is often semantically specialized in some sense, on occasion to the point of obfuscating the relationship, e.g., P-Austro-Kadai *śupak > P-Kadai *$C_s$upak > *phwak 'pod/sheath/skin' (Benedict 1975:225), P-Hesperonesian *ʔupak 'bark'; also (Malagasy) 'skinned/peeled'; also *ʔəpak 'split off' (Blust 1980a; not listed there as a doublet of *ʔupak).

The Formosan languages are far more conservative than the Hesperonesian group in maintaining an original V_1, so much so that the simple destressed replacement is often considered deviant, e.g., in connection with P-Austronesian *Cubuq 'bamboo shoot', Tsuchida (1976:106) describes the Ami cognate, təbuq (with regular t- < *C-), as 'perhaps cognate, but the ə for anticipated *u* is inexplicable'(!). P-Austronesian *u in SYL-1 is, in fact, unusually susceptible to destressed replacement, even in the Formosan languages. In a few roots with V_1 = *u, the replacement has been complete everywhere except in the conservative Paiwanic group: SIX (*u partially maintained), LOWLANDS/ (*u maintained in Paiwan and Favorlang), SAND (*u maintained in Rukai: Mantauran), SPLIT/ (*u maintained in Ami). This phenomenon has gone largely overlooked by Austronesianists, although Dahl (1976) reconstructs a non-canonical *uən$_1$əm = *wənəm for SIX (*w- does not occur before *ə), apparently in an attempt to handle the V_1 = /u/ reflexes encountered in Paiwanic. The obvious reconstruction is P-Austronesian *ʔunəm ~ *ʔənəm, a typical destress doublet, strengthened here by the assimilation factor. The /u/ reflexes in the above roots can, in fact, be explained only if reconstructed for the original V_1 of the roots involved, as confirmed by the Japanese evidence in all but one cognate set, LOWLANDS/, where Japanese also has replaced through destressing.

As indicated above, destressed replacement is uncommon in SYL-2 and probably is to be explained by (a) special conditioning factor(s) in any given case, e.g., in EARTH, where Proto-Hesperonesian has *tana? ~ *tanə?, the original *pl- initial cluster may have played a role. In other roots V_2 = *ə may simply reflect an underlying *a ~ *ə variation; cf. HOLD (IN HAND ~ MOUTH) - Note. In the uncommon trisyllabic roots, however, the *ə vowel in SYL-3 is readily explained in terms of 'weak (falling)' stress in an unduly (for Austronesian) lengthy form; cf. P-Hesperonesian *lintaq (< *limantaq) ~ *lima(n)tək 'leech', the latter a doublet form with 'weak stress' replacement of both *a by *ə and *-q by *-k (see Benedict 1975 for the Kadai cognates). It is also likely that the uncommon destressed vowel in SYL-2 reflects, on occasion, an earlier (syncopated) trisyllabic root: cf. HAIR[I].

The mainland Austro-Tai languages, with their rigid monosyllabic canonical structures, do not present any direct parallel to developments in Japanese (6.5). The Kadai languages do have numerous forms developed through initial syllable destressing but these are complicated by subsequent vocalic transfer (see 6.1), as exemplified in P-Tai *?bl/rɨan^ 'moon, month' (F-K. Li 1977:91, 281), from P-Austro-Tai *(m)bulal (> P-Hesperonesian *bulan) 'id.' (see 5.1 for the Chamic cognates), from *?bəlal (through vocalic transfer) < *?bulan (through destressing of V_1) < *qa-bulal (see 9.21 for this widespread Austro-Tai prefix). The very existence of this Kadai pattern, however, serves to establish initial syllable destressing as a feature (actual or potential) at the Proto-Austro-Kadai level.

6.5 Japanese destressed vowel reflexes:

As might have been anticipated in view of the Japanese reflex for Proto-Austro-Tai *ə (Table 1), OJ /ö/, Jp. /o/ is the regular destressed vowel in the language, as shown most clearly in the following doublet for RICE, in which the destressed replacement served to maintain the final syllable intact (5.22):

RICE: P-Austro-Japanese *krumay > *kumai > kuma
> *kəmai > kömë

In the doublet for BONE, however, the form without destressing occurs only in a compound, with maintenance of the final syllable:

BONE: P-Austro-Japanese *bani > *-bani-a > -bane
*bəni > *bəni-a > Fone

In one cognate set with destressed vowel in Japanese there is a parallel destress doublet at the Proto-Hesperonesian level while in another such set one of the Hesperonesian languages reflects the destressed vowel, permitting reconstructions of destress doublets in both roots:

CALM: P-Austro-Japanese *[t,C]adoq
*(n)[t,C]ə(n)doq > nödök-a
NIGHT: P-Austro-Japanese *ɣabiʔi
*ɣəbiʔi > yöFi

Other roots in this group lack parallels elsewhere but it should be noted that they are generally of limited occurrence (only SPITTLE/ at the Proto-Austronesian level), hence the possibilities of uncovering parallels are likewise limited:

BIRD^{II}: P-Austro-Japanese *tari > töri
REBEL/: P-Austro-Japanese *[s,š]amuk > sömuk-i
RICE/^{II}: P-Austro-Japanese *mami > momi
SPITTLE/: P-Austro-Japanese *ḷudaq > yoda-ri
STEEP/: P-Austro-Japanese *sipaḷ > soba
YEAR: P-Austro-Japanese *[t,C]uxis > tösi

The destressed vowel after labial stops, however, is /o/ ~ /e/, with one instance of doublet formation, along with a destress parallel in Austronesian:

NAVEL: P-Austro-Japanese *putsəj
*pətsəj > Fozo ~ Feso

In another root in this group there is a destress parallel even at the Proto-Hesperonesian level as well as within Kadai (in Be):

LOWLANDS/: P-Austro-Kadai *buna
*bəna > Fena

The remaining cognate sets in this group lack parallels elsewhere but none is well represented in Austronesian, hence the possibilities of parallelism are severely limited:

ROOM: P-Austro-Japanese *baɣa > Feya
STAR: P-Austro-Japanese *buxis > Fosi
STEM: P-Austro-Kadai *ba(n)taŋ > Feta
WOOD (CHIPS): P-Austro-Japanese *pa(ń)caŋ > Fota

There is evidence for early dialectal /o/ ~ /e/ variation after labials; cf. the 'Eastern' dialect (see 6.0) met-i 'hold' (cited in Ōno et al. 1982) for standard OJ möt-i (see HOLD/).

After w-, another labial consonant, Japanese has /o/ as destressed reflex in the final syllable of FISH, probably from an original trisyllabic root (see Glossary) but /e/ in the doublet forms under BAIT and /e/ ~ /i/ after initial *w- in DOG (see Glossary).

After the formulaic initial ?- (5.0), the destressed reflex is the regular ö/o in the only available cognate set: GRANDFATHER/.

Apart from the exceptional FISH (above), the destressed vowel appears in SYL-2 in the Japanese cognate only in ACCOMPANY/, perhaps through compounding (-na-i) or assimilation to V_1 (see Glossary).

Finally, one would have to anticipate that on occasion Japanese has maintained an original root vowel that has been replaced by the destressed vowel in Austronesian, especially in roots not represented in

the Formosan languages, which are more conservative in retaining V_1 vowels (see 6.4). Six such cognate sets have been uncovered, with the Japanese evidence for an original V_1 vowel tentatively supported by the Kadai evidence (ROUND - see Note):

BUSH/: P-Austro-Japanese *rabuŋ > yabu (P-Hesperonesian *rəbuŋ)

COLD/: P-Austro-Japanese *[ts,tš]a(m)puq > samu- (P-Hesperonesian *t'əpu?)

COOK/: P-Austro-Japanese *talak > yak-i (P-Austronesian *talək)

OFFAL: P-Austro-Japanese *(n)[ts,tš]aRap > ara (P-Hesperonesian *t'aγəp)

ROUND: P-Austro-Kadai *(m)baluR > maru (P-Hesperonesian *baluγ)

WEAK/: P-Austro-Japanese *lu[ts,tš]u (P-Hesperonesian *lə(n)t'u)

6.6 Vocalic correspondences (before glide):

The Proto-Austronesian vocalic system, as generally reconstructed, has four vowels */a i u ə/ before stops and nasal finals but only the three primary vowels */a i u/ before *-y and *-w. In an early paper (1949) Dyen proposed that final *-əy be reconstructed in a number of roots, some very widespread, which have -i (rather than the anticipated -ai ~ -e) in Malay and Javanese, e.g., P-Hesperonesian *pajay 'rice plant' (see 7.21) > Malay padi (> English *paddy*), Javanese pari. He also (1953) proposed that *-əw be reconstructed in one root and later (1964) Hendon expanded upon this thesis, setting up *-əw in a number of Hesperonesian roots.

These proposals have fared none too well at the hands of Austronesianist critics. Blust (1982b) has shown that there are eight (!) different sets of correspondences within Hesperonesian for the final *-ay roots as cited in Dempwolff 1938, which can be reduced to five main sets without in any way supporting Dyen's thesis of a basic *-ay vs. *-əy division. The fact that the Formosan languages consistently have simply -ay (or the

equivalent) as a reflex here is stressed by Dahl (1976: Chap. 11), who also (1976: Chap. 12) marshals evidence against Hendon's *-əw. One root stands out, however, as pointing unmistakably to *-əw at the Proto-Austronesian level and, by good fortune, this very root (DOOR) has cognates in Kadai as well as in Japanese, with the body of evidence (see below) all pointing in the same direction.

In addition to final *-ay and *-aw, with by far the largest functional loads, Proto-Austronesian also had *-uy and *-iw, the latter in only a handful of roots. The two mainland families show similar final glide combinations, with evidence for *-əw (see DOOR) and *-əy (see FEMALE/ under 6.7) but to date none for *-iw. This mainland evidence, however, particularly that from Kadai, has been complicated by the operation of vocalic transfer (see 6.1), at times in the most complex fashion (cf. BEAR), hence the Austronesian material in general is more useful for comparative purposes.

The Japanese reflexes for the final glide combinations are as follows:

Table 2. Vowel + glide correspondences

P-Austro-Tai	*P-Austronesian*	*OJ*	*Proto-Jp.*
*-ay	*-ay	ë/e	*ai
*-əy	*-[ə]y	i	*i
*-uy	*-uy	ï/i	*ui
*-aw	*-aw	o	*ou
*-əw	*-[ə]w	o	*ou
*-iw	*-iw	i	*ii

NOTES

(1) See 6.0 for the distributions of ë/e and ï/i; the working assumption made here (cf. Miller 1967:281–2) is that both /ë/ and /ï/ earlier occurred after consonants of all kinds, although the reflexes 'work' in any event.

(2) The /o/ is ambiguous after labials (except m) (6.0), also elsewhere in the absence of disambiguating Old Japanese data. In the roots cited below an 'authenticated' /o/ is indicated by the Martin 1979 transcription /wo/.

(3) It can be seen that the Old Japanese reflexes are asymmetrical, much as in Table 1, where P-Austro-Tai *e merges with *i while P-Austro-Tai *o remains distinct. It is possible, however, that the 'Eastern' dialect of Old Japanese (see 6.0) had symmetrical reflexes, with *-əw > -u paralleling *-əy > -i, e.g., for Jp. kumo, OJ kumwo = kumo 'cloud', the 'Eastern' form cited in Ōno et al. 1982 is /kumu/, perhaps from original *kuməw.

(4) Final *-[ə]y and *-[ə]w are both indicated for Proto-Austronesian although the evidence is minimal; cf. (below) LEG/ and (the best single bit of evidence) DOOR. It would appear that the P-Austro-Tai *a vs. *ə

distinction before final glides had been all but lost at the Proto-Austronesian level, with the resultant randomization of reflexes discussed above. On the whole, however, it seems that -ay or equivalent reflexes in Austronesian are more common than -i for an original *-əy but -u is more common than -aw or equivalent reflexes for an original *-əw. The latter circumstance makes it possible at times to reconstruct Proto-Austro-Tai/Proto-Austro-Japanese final *-əw on the basis of P-Austronesian *-u = OJ -o; cf. (below) HORN, HUNDRED.

The canonical reduction patterns of Japanese (5.1, 5.2) show in unmistakable fashion that OJ /ë/, /ï/, and /wo/ = /o/ all stood for earlier (Proto-Japanese) disyllabic vowel clusters: *ai, *ui ~ *oi, and *ou, respectively. As shown by roots (5.1), the final *-i in such clusters was often the reflex of an earlier dental or other consonant (or cluster) and was 'separable' from the preceding *a or (less often) *u in compounding, e.g., më (< *mai) 'eye' but ma- as cp. form; note also the doublet under RICE (below). Proto-Jp. *-ui (< P-Austro-Kadai *-uy) is readily reconstructible on the basis of OJ Fï and the 'Eastern' dialect /Fu/ (cited in Ōno et al. 1982) in the root for FIRE (below). Japanese often has /o/ in compounded forms, as in Fogusi 'fire prong' (kusi 'skewer') but here the /o/ stands for /ö/ in most, if not all, cases and is to be taken as the destressed vowel (see 6.5). In the doublet for TREE (below), the common -ï form must, in fact, be so interpreted: *kašiw > *kašii > *kayi > *kəyi > *köi > kï.

P-Austro-Tai *-ay > -ë/e

DIE/END/KILL: P-Austro-Tai *(ma-)play > P-Austronesian *ma-Cay
> P-Kadai *[m]aplay^{A}
> P-Miao-Yao *day^{C} < *tay^{C}
*pa-play > P-Austronesian *pa-Cay
> P-Miao-Yao *tay^{C} < *[pa]tay^{C}
> Jp. Fate(-ri)
HUNGRY: P-Austro-Tai *?u̯ay > P-Austronesian *?u̯ay
> Jp. ue- (< *u̯e-)

P-Austro-Tai *-əy > -i

ANT/: P-Austro-Japanese *[q,ʔ]aləy > P-Austronesian *[q,ʔ]alay
> Jp. ari
LEG/: P-Austro-Japanese *qaxəy > P-Austronesian *qaq[ə]y
> Jp. asi
WORM/: P-Austro-Kadai *[q,ʔ]u(n)zəy > P-Austronesian *[q,ʔ]uzay
> P-Kadai *C_tu(n)[z]əy^C
> Jp. uzi

P-Austro-Tai *-uy > -ï/i

FIRE: P-Austro-Kadai *śa(m)puy > P-Austronesian *śapuy
> P-Kadai *C_sa(m)puy^A
> OJ Fï ~ Fu < Fui
MOUTH: P-Austro-Tai *gu(ń)dźuy > P-Austronesian-*ŋu[d,dž]uy
> P-Miao-Yao *(ń)dźuy^A
> Jp. kuti ~ kutu- < *kutï

P-Austro-Tai *-aw > -o

DOWN/: P-Austro-Japanese *(n)tsi(m)baw > P-Austronesian *(n)[ts,tš]ibaw
> OJ simwo = simo
TOP: P-Austro-Japanese *babaw > P-Austronesian *babaw
> Jp. Fo

P-Austro-Tai *-əw > -o

DOOR: P-Austro-Kadai *pi(n)təw > P-Austronesian *pi(n)t[ə]w
> P-Kadai *[SYL]təw^A

> OJ two = to

HORN: P-Austro-Japanese *tśuŋəw > P-Austronesian *[ts,tš]uŋu

> OJ tunwo = tuno

HUNDRED: P-Austro-Japanese *[γ,R]i(m)bəw > P-Austronesian *γibu

> OJ mwomwo = momo

> OJ -bo

THIGH: P-Austro-Japanese *[q,ʔ]u(m)pəw > P-Austronesian-*[q,ʔ]upu

> OJ mwomwo = momo

P-Austro-Tai *-iw> -i

TREE: P-Austro-Japanese *kašiw > P-Austronesian *kašiw

> Jp. kö < *kai

> Jp. kï < *köi

6.7. Vocalic correspondences (secondary):

The above two sets of vocalic correspondences in Japanese (6.5 and 6.6) account for all eight vowels of Old Japanese with the exception of /ye/ = /e/. This has long been considered by Japanologists to have arisen from an earlier /i/ + /a/ and the comparative evidence bears this out. It also appears that /u/ + /a/ gave rise to /wo/ = /o/, making for a symmetrical development: high vowel + /a/ > mid vowel. Of the five cognate sets that illustrate this development, four have 'body part' or 'kin term' suffixed -a (9.42, 10.45), with mainland parallels in two of the latter:

BONE: P-Austro-Japanese *bani > Jp. -bane < *-bani-a

> Jp. Fone < *Foni-a (with destressing)

SIBLING (OLDER): P-Austro-Kadai *ʔa(ń)ji > P-Austronesian *(su-)ʔa (ń)ji

> P-Kadai *ʔa(ń)[j]i^{B}

> Jp. ani 'older brother'
> Jp. ane < *ani-a 'older sister'
SISTER (OF MAN)/: P-Austro-Tai *[ʔ]imu-a > P-Miao-Yao *mua^{C}
> OJ imwo = imo < *imu-a
FEMALE/: P-Austro-Tai *(m)bəhi > P-Austronesian *bəhi
> P-Kadai *(m)bii$_{[j]}$
> OJ -mi
*(m)bəhi-a > P-Kadai mia^{A} < *mbi-a
> OJ mye = me < *mbi-a
SIDE/: P-Austro-Japanese *təpi > P-Austronesian *təpi
> Jp. -Fe < *-Fi-a
> Jp. -be < *-bi-a

In the root for FEMALE/ Old Japanese has -mi < *mbi < *mbə[h]i, with regular loss of *h (7.83) producing the equivalent of final *-əy > *-i (see (6.6), precisely paralleled in the Kadai development. The following pair of roots also show regular loss of a medial consonant, here /l/ or /w/ after *u, with subsequent handling as vowel + glide:

YELLOW: P-Austro-Kadai *kulijaŋ > Jp. *ku[l]i[jaŋ] > *kui > *kï > ki
FRUIT/: P-Austro-Japanese *(m)buway > Jp. mu[w]ay > *moi > mï > mi

For FRUIT/ an alternative reconstruction of the final vocalism is available; see Note 1 on this entry.

The same kind of development can be seen in Japanese forms reflecting suffixed -i, either of verbal or 'kin term' type:

EAT/: P-Austro-Tai *kaʔ-i > OJ kë < *kai < *ka[ʔ]-i
RISE/: P-Austro-Kadai *(n)tšaka-i > OJ takë < *takai < $^{\infty}$taka-i

ANCESTORS/: P-Austro-Kadai *k-amu-i > OJ kamï < *kamui < *kamu-i

GRANDFATHER/: P-Austro-Kadai *ʔa(m)pu-i > OJ -Fï < *-Fui < *-Fu-i

HEAD (OF LINEAGE)/: P-Austro-Japanese *datu-i > OJ ti < *tui < *tu-i

Finally, partial reduplication led to secondary /wo/ = /o/ from *au in two roots:

FIELD (DRY)/: P-Austro-Japanese *qumahqumah > OJ umwo = umo < *umau[ma]

SPIDER: P-Austro-Japanese *kuba > Rk.: Shuri kubaa *kumbakumba > OJ kumwo = kumo < *kumau[ma]

7.0 Japanese consonantal reflexes:

We are faced here with the basic problem of relating one of the simpler consonantal systems in the world (Japanese) to one of the more complex (Austro-Tai). Seven articulatory proto-positions must be set up for the Proto-Austro-Tai system, along with some consonantal clusters; the Old Japanese pattern included just four positions, without clusters. Most astonishingly, despite this basic discrepancy, Old Japanese had distinct reflexes for some pairs of phonemes that show general merging elsewhere. The Japanese evidence, in fact, is of great value in setting up these contrasts as well as in establishing the consonantal components of many roots, including some containing clusters.

The problem is best approached by a consideration of the consonantal system of Proto-Austronesian, now reconstructed in some detail albeit with many unresolved difficulties. This system is closest to that of Japanese, in an historical sense, and the comparative materials to be drawn upon are especially rich here, further enhancing the value of this approach.

Table 3. Proto-Austronesian consonants

Labial	p	b	m	w			
Dental	t	d	n			l	
	ts	dz		s	z		
Alv.Pal.	tš	dž		š	-	r	
Palatal	c	j	ń				y
	tś	[dź]		ś	[ź]		
Retroflex	ṭ	ḍ					
Velar	k	g	ŋ	[x]	ɣ	ḷ	
Postvelar	q	G	-	-	[ʁ]		
Glottal	ʔ			h			

NOTES

(1) The above table is comparable with those in Dahl 1976:101 and Tsuchida 1976:305–9 although the transcriptions vary considerably (Ting 1978:337 has a useful comparative table), as pointed out below, and the alveolo-palatal line is additional. Tsuchida 1976 follows Dyen in setting up still further provisional distinctions (see below) and the above scheme is to be considered 'minimal', with possible future entries at slots marked (-).

(2) The table omits *C, introduced by Dyen (1965) as a cover symbol for a special Formosan reflex set (other than the regular *t) corresponding to P-Hesperonesian *t. The mainland evidence, as supplied primarily by the Kadai languages, shows that *C stands for earlier (Proto-Austro-Tai) consonantal clusters of several kinds (see Benedict 1975, 1980). It now appears that in Paiwanic, at any rate, this *C set also serves as the reflex for the simple voiceless palatal stop, *c (see 7.1).

(3) The table also omits the 'nasal increment', units/clusters consisting of nasal + homorganic stops: *mp, etc., with the nasal element often optional: *(m)p, etc. These are poorly represented in the Formosan languages (Benedict 1976) but nasal increment reflexes play an important role elsewhere in Austronesian, especially in Oceanic and in the mainland families. They function as units rather than clusters in many ways, with distinctive reflexes, and are absolutely characteristic of the stock as a whole, entirely distinct from anything to be found either in Austroasiatic or in Sino-Tibetan. Japanese rivals Kadai and even Miao-Yao in its fondness for these nasal increment forms, which are considered separately below (7.3).

The Proto-Austronesian consonantal system outlined above, with the addition of stop/m + liquid clusters and nasal increment units/clusters and the indicated slots filled in, closely approximates the Proto-Austro-Tai system as now provisionally reconstructed. The only 'extra' in the Proto-Austronesian system is the pair of retroflex stops, which represent Proto-Austro-Tai dental + liquid clusters. In the postvelar series, the nasal slot can be filled in by the mainland evidence for *N but the voiceless fricative *X is problematic.

Both Proto-Kadai and Proto-Miao-Yao can now be reconstructed on a provisional basis, at any rate, with highly specific reconstructions available at many points, e.g., the complex initials of Proto-Miao-Yao. A recent Chinese source (F-S. Wang 1979) presents the Miao reflexes for these initials in detail, richly supplementing the Proto-Miao and Proto-Yao reconstructions achieved earlier by Purnell (1970). Complete reconstructions at the Proto-Tai level have also recently become available in the authoritative *Handbook* by F-K. Li (1977), serving as a sound basis for reconstructions at earlier Kadai levels: Proto-Kam-Tai, Proto-Li-Kam-Tai, and even Proto-Kadai.[4] For reconstructions at these earlier levels the writer has been able to make use of recent publications by Chinese linguists, each in the form of a sketch (*jianzhi*) containing over 1,000 lexical items, on the Kam-Sui languages and on Li and Gelao, the last bridging the main gap in the Kadai family. All in all, the mainland

languages are now far better known than in the last decade, the era of Benedict 1975, and both Proto-Kadai and Proto-Miao-Yao reconstructions can be used to throw light on many aspects of the Proto-Austro-Tai consonantal system, especially clusters (primarily here Proto-Kadai) and nasal increment forms.

Table 4. Old Japanese consonants

abial	F	*b	m				w
Dental	t	*d	n	s	*z	*r	
Palatal							y
Velar	k	*g					

NOTES

(1) Consonants occurring only in medial position are marked with *; none occurs in final position.

(2) /y/ does not occur before /i/, nor /w/ before /u/.

(3) The above scheme follows that presented in Martin 1979, with both /d/ and /z/ before high vowels. Miller (1967:280) makes use of /t^z/ and /d^z/.

(4) F is a bilabial fricative, represented by /p/ in early Chinese transcriptions and by some specialists reconstructed as such for Old Japanese itself; in any event, there is a firm consensus that it stood for a somewhat earlier (pre-OJ) *p, hence its positioning in the above table. In most modern dialects, including Tokyo Standard, it has been retained only as an initial before /u/, with shift to /h/ before other vowels (written /F/ in this study), with simple loss (> [0]) medially apart from OJ -aFa- > Jp. -awa-.

(5) /di/ and /zi/ have merged in Tokyo Standard /zi/ (phonetically [ji]), and /du/ and /zu/ in /zu/.

(6) /w/ has been lost (> [0]) except before /a/.

As can be seen, Old Japanese had already reduced the Proto-Austro-Tai consonantal inventory by over half, even by the most conservative reckoning, and the modern Japanese language has simplified still further by reducing the total number of contrasts (without any decrease in the number of phonemes). Of special concern to the comparativist, in initial position Old Japanese had already lost the basic voicing contrast of the Proto-Austro-Tai system as well as the contrasts provided by the /r/ element. Additionally, and of equal or even greater importance, Old Japanese had already reduced to vocalic finals, vastly complicating the problem of establishing reflexes of any kind for the consonantal finals of Proto-Austro-Tai (see 7.42 for the final *-n problem). Given these circumstances, one would have counted himself fortunate if he had been

able simply to establish the fact of a Japanese/Austro-Tai relationship per se; certainly the historically significant consonant reflexes of the Japanese language could never have been anticipated.

7.10 Stop reflexes:

The eleven stops of the Proto-Austronesian system (Table 3), with voicing contrasts in five of the six positions, are also to be set up at the Proto-Austro-Tai level:

Without voicing:	p	t	c	k	q	ʔ
With voicing:	b	d	j	g	G	-

The basic voicing contrasts appear to have been well maintained both in Proto-Austronesian and in Proto-Kadai. In Proto-Miao-Yao, on the other hand, there is much evidence of secondary voicing in initial position, seen most clearly in the case of initial *t- > d- (see DIE/; cf. Benedict 1975:156). In many if not all roots one has the alternative of reconstructing doublet forms at the Proto-Austro-Tai level, reflecting Proto-Miao-Yao voiced stop vs. Proto-Kadai voiceless stop. In the present study the Proto-Miao-Yao voicing is interpreted as secondary.

The voiced postvelar: *G must be reconstructed at some early level in Kadai, perhaps even (instead of the conventional *γ) for Proto-Tai itself (Haudricourt 1952). It must also be reconstructed for Proto-Miao-Yao (see F-S. Wang 1979: No. 105 for P-Miao *G-) but here appears to be secondary in many, if not most cases. As for the Austronesian family, Dyen (1965) set up a formulaic *Q_1 for the rare correspondences Proto-Hesperonesian/Proto-Malayo-Polynesian final *aʔ = Formosan *-h, medial *-ʔ- = Formosan *-ʔ-. The latter occurs in P-Austronesian *paQ$_1$iC = *paQ$_1$ic 'bitter' (Tsuchida 1976:239); also (Paiwan: Southern) 'astringent'; also (Yami, Ivatan, Bunun) 'salty'; also (Kanakanabu; Northern Philippine: Kankanay, Inibaloi) 'sour'; also (Saisiyat) 'spicy', which appears to be related not only to P-Southern/Central Tai *phet

'hot, pungent' (F-K. Li 1977:64) but also to a Li cognate set for which a voiced velar or postvelar obstruent initial is indicated: Bao-ding gec (note the agreement with Austronesian in final), Tong-shen get, Zhong-sha git, Yuan-men khet, Xi-fang, Bai-sha, White Sand xet^{L}, Qian-dui het^{L}, Bao-cheng hit^{L}, Hei-tu rit, Central Li drit 'peppery'. The reconstruction P-Austro-Kadai *paGec is strongly indicated here, allowing Dyen's *Q_1 to be assigned to the *G slot in the Proto-Austronesian system. As a final this phoneme occurs in P-Kadai *paGpaG 'leaf', represented in Japanese as well as in Kadai (see 7.13 -Note). As an initial, however, *G has been reconstructed only for TOOTH: *(N)Gi(m)pan, with reflexes unavailable outside Austronesian.

The voiceless postvelar: *q, shifted to *? in Proto-Hesperonesian/ Proto-Malayo-Polynesian, has been well maintained in Atayalic and in Paiwan, Ami, and Thao, with replacement by /?/, /h/, or [0] in other Paiwanic languages as well as in Tsouic (Tsuchida 1976:163–73 sets forth no fewer than four sets of reflexes here: *q_1 - *q_4). This postvelar must also be reconstructed for both Proto-Kadai and Proto-Miao-Yao although both the Kadai and Miao-Yao families show widespread tendencies to shift to velars (Benedict 1975:162), with Austronesian/ mainland correspondences sufficing for the reconstruction of *q at the Proto-Austro-Tai level.

Glottal stop was first reconstructed at the Proto-Austronesian level by Dyen (1965) in a few roots but Dahl (1976:36–7) found the evidence insufficient and did not include this element in his Proto-Austronesian reconstruction scheme. There is much secondary glottalization in the Formosan languages, to be sure, especially in final position in Atayalic and Paiwanic, but Tsuchida (1976:182–5) reconstructs glottal stop in a number of roots on the basis of Ami and Bunun correspondences with Tagalog and Aklanon (Philippine) and Zorc has continued with this line of reconstruction, supported also by Blust (1980a:21–2). The evidence is strongest for medial *-?-, as in NIGHT (see Glossary). As for the mainland languages, both Proto-Tai and Proto-Miao-Yao have glottal stop initially, but not in contrast with zero, while in Proto-Miao-Yao final *-? stands for Proto-Austro-Tai-level final *-k or *-q. In the present

study *?- is used initially at the various proto-levels, as well as in medial position in Proto-Austronesian, but not in final position apart from the P-Austro-Tai *ka? 'eat', where it perhaps serves as a morpheme-boundary marker (see EAT - Note 2).

The voiceless palatal stop: *c has long been something of a curiosity to Austronesianists: it occurs in a sizeable number of roots in Proto-Hesperonesian, but only as initial or medial, and there has always been a dearth of cognates for such roots in Formosan, as required to set up this phoneme at the Proto-Austronesian level. Dahl (1976:82) attempts to reconstruct only one such root and this failed to gain the support of Tsuchida (1976:186). Fortunately, one such root (SEA) has now been uncovered, with Polynesian and Paiwanic as well as Japanese representation, and the Paiwanic reflexes coincide with those for *C, the cover symbol for original consonant clusters (7.0). The latter could now be written *c, at least for Proto-Paiwanic, but *C will be retained in this study in the interest of clarity. The Proto-Paiwanic and Proto-Hesperonesian correspondences are as follows:

	P-Paiwanic	P-Hesperonesian
Consonant cluster: initial/medial:	*C	*t
Palatal stop: initial/medial:	*C	*c
final:	*-C	*-t

The occurrence of Paiwanic (and Formosan) *C in final position had hitherto posed a problem (cf. Benedict 1980) in view of the non-occurrence of consonant clusters in this position in the Proto-Austronesian canonical shape (see 5.0). It is now evident that the many cognate sets with Formosan final *-C = P-Hesperonesian final *-t (cf. CUT (MEAT)/) are to be reconstructed with final palatal stop: *-c, nicely filling in the pattern of final stops inasmuch as final *-j (> P-Hesperonesian *-j) has long been established as a feature of Proto-Austronesian. It also appears that a final *-c can be reconstructed for Proto-Li/Proto-Kadai on the basis of its appearance as a reflex in Li: Bao-ding (see the above-cited root for PUNGENT).

7.11 Stop reflexes - initials:

P-Austro-Tai *p- > /F/

BEAT/: P-Austro-Tai *pakpak > Fa ~ Fag-i
CHEEK: P-Austro-Tai *pi(N)Gi > Fi
DIE/: P-Austro-Tai *pa-pl̥ay > Fate(-ri)
GOD/: P-Austro-Kadai *pil̥i > Fi ~ -ri
LEAF: P-Austro-Kadai *paGpaG > Fa ~ Fappa
LEG/: P-Austro-Tai *paqi > Fagi
MOTHER/: P-Austro-Kadai *papa > Fa ~ FaFa
NAVEL: P-Austro-Japanese *putsəj > Foso ~ Feso > -boso
ONE/: P-Austro-Japanese *pitroŋ > Fitö
OPEN/: P-Austro-Japanese *pil̥ ak > Firak-i
PAIR/: P-Austro-Japanese *patšaŋ > Fata
SQUIRT/: P-Austro-Japanese *(m)piR(m)piR > Fir-i
TWO: P-Austro-Japanese *putśa > Futa
WOOD (CHIPS): P-Austro-Japanese *pa(ń)caŋ > Fota
VULVA/: P-Austro-Kadai *pipi > Fiwi

NOTE: In DIE/ an old prefix (*pa-) is involved, with the initial *p- yielding the same Jp. F- as a root-initial *p-.

P-Austro-Tai *p- > OJ w- (before *o)

HILL/: P-Austro-Japanese *po(ŋ)krak > woka ~ wo
HIND-PART: P-Austro-Kadai *(m)po(ŋ)kor > wo

P-Austro-Tai *b- > /F/

BELLY: P-Austro-Tai *ba[r]aŋ > Fara
BOARD/: P-Austro-Japanese *bali[γ,R] > Fari
BODY: P-Austro-Kadai *ba(n)traŋ > Fada

BONE: P-Austro-Japanese *bani > Fone (< *Foni-a)
FAST (BLOW)/: P-Austro-Japanese *(m)baɣat > Faya-
FLOWER: P-Austro-Tai *baŋal > Fana
LOWLANDS/: P-Austro-Kadai *buna > Fena
PENIS/: P-Austro-Japanese *bo[t,C]oq > Fotö
ROOM/: P-Austro-Japanese *baɣa > Feya
SPREAD/: P-Austro-Kadai *(m)biḷaj > Fira ~ Firë
STAR: P-Austro-Japanese *buxis > Fosi
STEM/: P-Austro-Kadai *ba(n)taŋ > Feta
STRIP/: P-Austro-Kadai *bak(bak) > Fag-i

NOTE: Unlike initial *p- (above), *b- before *o did not yield OJ w-, on the basis of the single available cognate set (PENIS/). In medial position before *o both phonemes yielded OJ -w- (7.12).

P-Austro-Tai *t- > /t/

BEAT/: P-Austro-Tai *tutuh-i > tutui
BIRD^{II}/: P-Austro-Japanese *tari > töri
BIRD OF PREY: P-Austro-Japanese *taka- > taka
BLOW/: P-Austro-Kadai *tiyup > -ti
BORE/: P-Austro-Kadai *tə(m)buŋ > toFï
CLAP/: P-Austro-Kadai *[SYL]top > töb-i
HIT/: P-Austro-Tai *(n)tak(n)tak > tatak-i
OPENING/: P-Austro-Kadai *tu(m)buŋ > tubï
PECK: P-Austro-Japanese *tuktuk > tutuk-i
PLACE/^{II}: P-Austro-Tai *ti > ti-
SMALL: P-Austro-Japanese *tipi[ts,tš] > tiFis-a

P-Austro-Tai *[t,C]- > /t/

ACCOMPANY/: P-Austro-Japanese *[t,C]əma[n,l] > tömö(-na-i)
BIND/: P-Austro-Kadai *[t,C]a(m)ba[t,c] > taba
CROWDED/: P-Austro-Japanese *[t,C]əɣəb > töyö

GRIP/: P-Austro-Japanese *[t,C]aŋ[t,C]aŋ > te ~ ta-
SIDE (OPPOSITE)/: P-Austro-Japanese *[t,C]a(m)baŋ > taFë
YEAR: P-Austro-Japanese *[t,C]uxis > tösi

NOTE: See 7.25 for the reflex for *C (consonant cluster).

P-Austro-Tai *d-
P-Austro-Tai *c-
P-Austro-Tai *j-

NOTE: No certain cognate sets available for any of this group of initials, which are uncommon or rare (see discussion below).

P-Austro-Tai *k- > /k/

CLAN/: P-Austro-Japanese *kaba[n,l] > kaba-
DAY: P-Austro-Japanese *ka > (u-)ka
EAT/: P-Austro-Tai *kaʔ-i > kë (< *kai)
HOOK: P-Austro-Japanese *ka(ŋ)kriŋ > kagi
PLACE/[I]: P-Austro-Kadai *ka > ka
SEIZE (WITH HANDS ~ TEETH)/: P-Austro-Kadai *(ŋ)kup(ŋ) kup > kuF-i
SHELL: P-Austro-Japanese *kapi[ts,tš,tś] > kaFi
SKIN: P-Austro-Japanese *kaba > kaFa
STALK/: P-Austro-Japanese *kudkud > kukï (< *kukui)
SWELLING: P-Austro-Tai *kə(m)buŋ > kobu
YELLOW: P-Austro-Kadai *kulijaŋ > ki (< *kui)

P-Austro-Tai *k- ~ *g- ~ *-g- > /k/

HOLD (IN HAND ~ MOUTH)/: P-Austro-Tai *kamkam ~ *kamgam > kam-i
HOLD TOGETHER/: P-Austro-Kadai *ka(m)pi[t,c] ~ *ga(m)pi[t, c] > kaFi ~ -gaFi

SHINE/: P-Austro-Tai *(ŋ)kiḷaŋ(kiḷaŋ) ~ *(ŋ)giḷaŋ(giḷaŋ) > kira-(kira)

P-Austro-Tai *g- > /k/

BORE/: P-Austro-Tai *girik > kiri (Rk. ~ [0]-)
CRAB: P-Austro-Tai *ga(ŋ)ki > kani (dial., Rk. g-)
EMPTY (UNOCCUPIED)/: P-Austro-Kadai *ga[r,R]ap > kara ~ karappo
MOUTH: P-Austro-Tai *gu(ŋ)dźuy > kuti ~ kutu-
TOOTH/: P-Austro-Japanese *gigi > ki
RASH (SKIN): P-Austro-Japanese *gušam > kusa

NOTE: It is possible that the Jp. dial., Rk. g- in CRAB and the Rk. ~ [0]- in BORE/ reflect an original P-Japanese-Ryukyuan initial *g- in these roots but the point must remain moot pending completion of the necessary Japanese-Ryukyuan studies.

P-Austro-Tai *q- > [0]

FIELD (DRY): P-Austro-Japanese *qumahqumah > umo (< *uma-u)
HOLE/: P-Austro-Japanese *qanan > ana
LEG/: P-Austro-Japanese *qaxəy > asi
LIVE/: P-Austro-Tai *qubrip > udi (> uzi)
NOISE/: P-Austro-Kadai *qo(n)tot > ötö
OUTSIDER/: P-Austro-Japanese *qa[t,C]a > ata (> ada)
RIBS: P-Austro-Japanese *qa-baRaŋ > abara (< *a-bara)
SPEAK/: P-Austro-Kadai *qibu > iF-i (< *iFu-i)

P-Austro-Tai *[q,ʔ]- > [0]

ANT/: P-Austro-Japanese *[q,ʔ]ləy > ari
EXCHANGE/: P-Austro-Japanese *[q,ʔ]u[r,R]up > ur-i

FISH: P-Austro-Japanese *[q,ʔ]iwak > iwo (> uo)
FOREST/: P-Austro-Kadai *[q,ʔ]aḷats > ara
RECITE/: P-Austro-Japanese *[q,ʔ]ucap > utaF-i
SHALLOW: P-Austro-Japanese *[q,ʔ]a[ts,tš]a[t,c] > asa-
SNAKE: P-Austro-Japanese *[q,ʔ]oḷəj > woröti (< *orot-i)
YOUNG/: P-Austro-Tai *[q,ʔ]o[t,C]on > ötö

P-Austro-Tai *ʔ- > [0]

HUNGRY: P-Austro-Japanese *ʔuḷay > ue-
ONE: P-Austro-Tai *ʔitsa > iza-
PUS: P-Austro-Japanese *ʔumuq > umi (< *umu-i)
WASH/: P-Austro-Kadai *ʔaRap > araF-i

The initial stop reflexes of Japanese are about as one might have predicted, given the lack of a voicing contrast in this position; note also *q- > [0] but medial *-q- > /k/ ~ /g/ (below). The only specially conditioned shift is that of *p- > w- before *o, probably via *pwo. The dial./Rk. g- in CRAB suggests that Proto-Japanese-Ryukyuan may have retained the voicing distinction of Proto-Austro-Tai/Proto-Austro-Japanese, at least in part. As for the lack of cognate sets for initial *d-, *c-, and *j-, the first two of these are uncommon (see above for *c- and note that the Proto-Austronesian glossary of Tsuchida 1976 lists only a paltry trio of initial *d- roots) while the last is rare in Austro-Tai, at best, and has not yet been reconstructed for any proto-level root (it is entirely lacking in Proto-Hesperonesian but is perhaps represented in Formosan by the initial PST *j_1- reconstructed in Tsuchida 1976:157–8).

7.12 Stop reflexes - medials:

P-Austro-Tai *-p- > /F/

FIRE: P-Austro-Kadai *śa(m)puy > Fï (< *Fui)
GRANDFATHER/: P-Austro-Tai *ʔa(m)pu-i > *-Fï (> -i)(Rk. bui-)

SHELL: *kapi[ts,tš,tś] > kaFi (> kai)
SIDE/: P-Austro-Japanese *təpi-a > -Fe (> -e)
SMALL: P-Austro-Japanese *tipi[ts,tš] > tiFis-a (> tiisa)
SPIT/: P-Austro-Japanese *tśu(m)paq > (~ Fak-i)
SPREAD/: P-Austro-Tai *sa(m)paR > Far-i
TOOTH: P-Austro-Tai *(N)Gi(m)pan > Fa

P-Austro-Tai *-p- > /b/

BAIT: P-Austro-Japanese *śaśu(m)pa > weba (> eba ~ e)
BREAK/: P-Austro-Japanese *rapuq > yabuk-i ~ yabu-ri
SPIT/: P-Austro-Japanese *tšu(m)paq > tubak-i
STEEP/: P-Austro-Japanese *sipal > soba

NOTE: The root for SPIT/ is also represented above by a likely doublet: Jp. Fak-i, the product of canonical reduction-left, with /F/ required by the initial position.

P-Austro-Tai *-p- > /w/ (before *o)

TEN: P-Austro-Kadai *polo[x]ot > -wo (> -o)

NOTES

(1) The *p is considered medial here inasmuch as the Japanese form has been compounded: *?itsa-polo[x]ot > *sawo > swo.

(2) See also 9.43 for suffixes *-po, with the stop preserved only after /p/, elsewhere showing the regular shift to /w/.

P-Austro-Tai *-p- (reduplicated) > (variable)

LEAF: P-Austro-Kadai *paGpaG > Fa ~ Fappa
MOTHER: P-Austro-Kadai *papa > Fa ~ FaFa
VULVA/: P-Austro-Kadai *pipi > OJ Fiwi (Rk. hii ~ hwi(i))

NOTE: Jp. Fappa for LEAF apparently reflects an early, non-standard *pagpag or the like, with -pp- the regular Japanese reflex for C + C. The -F-of Jp. FaFa for MOTHER indicates that a morpheme boundary (reduplicated form) must be set up at this point inasmuch as OJ -aFa- otherwise regularly yields Jp. -awa- (see SKIN et al. under P-Austro-Tai *-b-, below). The -w- of OJ Fiwi for VULVA/ perhaps also reflects an early morpheme boundary, paralleled in Ryukyuan (Shodon) but with a variant *FiFi (> hii) maintained in the Yonaguni dialect.

P-Austro-Tai *-p- ~ *-b- > /b/

SWELLING: P-Austro-Tai *kəmpuŋ ~ *kə(m)buŋ > kobu

P-Austro-Tai *-b- > /F/

BLOW (WITH MOUTH): P-Austro-Japanese *[ts,tš,tś]ibuk > Fuk-i
BORE: P-Austro-Kadai *tə(m)buŋ > toFï ~ Fï
BROTHER (OLDER): P-Austro-Kadai *ʔabi > Rk. afi
NIGHT/: P-Austro-Japanese *[γ,R]abiʔi > yöFi
SIDE (OPPOSITE)/: P-Austro-Kadai *[t,C]a(m)baŋ > taFë
SKIN: P-Austro-Japanese *kaba > kaFa
SPEAK: P-Austro-Japanese *qibu > iF-i (< *iFu-i)
SWAMP/: P-Austro-Japanese *tsabaq > saFa ~ aFa
TOP: P-Austro-Japanese *babaw > Fo
WIDE OPEN/: P-Austro-Kadai *labak > Fak-a

P-Austro-Tai *-b- > /b/

BIND/: P-Austro-Kadai *[t,C]a(m)ba[t,c] > taba
BUSH/: P-Austro-Japanese *rabuŋ > yabu
CLAN/: P-Austro-Japanese *kaba[n,l] > kaba-
OPENING/: P-Austro-Kadai *tu(m)buŋ > tubï
WIDE OPEN/: P-Austro-Kadai *labak > abak-i

NOTE: The last cognate set also appears in the foregoing list but as an initial, with canonical reduction-left, where the F- is determined by the position.

P-Austro-Tai *-b- > /w/ (before *o)

HAIR/: P-Austro-Tai (n)[ts,tš]a(m)boc > sawo
REED/: P-Austro-Kadai *tobos > wo-

P-Austro-Tai prefix + *b > /b/

RIBS: P-Austro-Japanese *(qa-)baRaŋ > abara (< *a-bara)

P-Austro-Tai *-t- > /t/

BAMBOO: P-Austro-Japanese *batakan > takë
BEAT/: P-Austro-Tai *tutuh-i > tutui
BOTTOM/: P-Austro-Kadai *(m)bə(n)təŋ > mötö
CUT (OFF, IN TWO): P-Austro-Kadai *kətatś > tat-i
DOOR: P-Austro-Kadai *pi(n)təw > to
HIT/: P-Austro-Tai *(n)tak(n)tak > tatak-i
NOISE/: P-Austro-Kadai *qo(n)tot > ötö
PECK: P-Austro-Japanese *tuktuk > tutuk-i
STAR/: P-Austro-Tai *bi(n)tuqun > tukï

P-Austro-Tai *-[t,C]- > /t/

HEAD (OF LINEAGE)/: P-Austro-Japanese *da[t,C]u > ti ~ titi
MOUNTAIN/: P-Austro-Japanese *lu[t,C]uk > tuk-a
OUTSIDER/: P-Austro-Japanese *qa[t,c]a > ata (> ada)
PENIS/: P-Austro-Japanese bo[t,C]oq > Fotö
YOUNG/: P-Austro-Tai *[q.?]o[t,C]on > ötö

P-Austro-Tai *-d- > /t/

PLAIN/: P-Austro-Japanese *pa(n)daŋ > Fata
SPITTLE/: P-Austro-Japanese *ḷudaq > yota-ri (> yoda-ri)

P-Austro-Tai *-d- > /d/

CALM: P-Austro-Japanese (n)[t,C]ə(n)doq > nödö

P-Austro-Tai *-c- > /t/

RECITE/: P-Austro-Japanese *[q,ʔ]ucap > utaF-i
SEA: P-Austro-Japanese *wacal > wata
WOOD (CHIPS): P-Austro-Japanese pa(n)caŋ > Fota

P-Austro-Tai *-j- > /t/

FOAM/: P-Austro-Tai *(m)pujaq > tak-i ~ taki ~ tagi
SIBLING (OLDER): P-Austro-Kadai *ʔa(ń)ji > Rk. ati

NOTE: Japanese has the nasal increment form for this root, ani, but /t/ for *-c- fits the overall pattern of stop reflexes.

P-Austro-Tai *-k-> /k/

BAMBOO: P-Austro-Japanese *batakan > takë
BIRD OF PREY: P-Austro-Japanese *taka- > taka
EAT/: P-Austro-Tai *ma-kai > maka- (< *maka-)
FISH/: P-Austro-Japanese *śikan > ika
GRANDFATHER/: P-Austro-Japanese *ʔaki > öki ~ -ki
HAIR[I]: P-Austro-Japanese *bukas > kë ~ ka- > -gë ~ -ga
HARD: P-Austro-Japanese *makatś > kata- (< *kat-a-)
RISE/: P-Austro-Kadai *tśaka > taka- > -ga-
STALK/: P-Austro-Japanese *kudkud > kukï

NOTE: In EAT/ an old prefix (*ma-) is involved, with the initial *k- of the root (*ka?) yielding the same reflex in Japanese as a root-medial *k-; the same Austro-Tai root appears to be involved in FISH/ (see Note on that entry).

P-Austro-Tai *-k- > /g/

CHIN: P-Austro-Japanese *dza(ŋ)go[t,c] > ago

P-Austro-Tai *-q- > /k/

STAR/: P-Austro-Tai *bi(n)tuqun > tukï

P-Austro-Tai *-q- > /g/

LEG/: P-Austro-Tai *paqi > Fagi

P-Austro-Tai *-ʔ- > [0]

LICK/: P-Austro-Kadai *ńaʔam-an > namë (< *naam-ë)
NIGHT/: P-Austro-Japanese *[γ,R]abiʔi > yöFi (< *yöFii)

NOTE: Cf. also 'alligator' under FISH - Note.

The medial stop reflexes of Japanese parallel those for the initial stops, with *b as well as *p yielding OJ w- before *o, but with *-q- merging with *-k- rather than being dropped (>[0]). Secondary voicing is commonly seen in compounded forms, e.g., HAIR[I] and RISE/, and in general there is evidence of random voicing/unvoicing in this medial position, notably for the labial stops. Miller (1967:286) points out that there has been a 'sporadic' secondary voicing of medial stops in the history of the language, as illustrated by the above-cited Japanese forms for OUTSIDER/ (ata > ada) and SPITTLE/ (yota-ri > yoda-ri). Martin (1979) systematically derives voiced medial stops from /n/ + stop, e.g.,

for the above he indicates Jp. ada < ata < *a(n)ta. This is a widely held view in the field and it is clear that some secondary medial voicing has arisen in this fashion through syncopation. It is by no means evident, however, that *all* medial voicing is of this origin and Miller (1967) has even suggested a relationship to the pitch accents of the language. From a comparative point of view, one might be tempted to relate this voicing to nasal increment forms (7.2). The correspondences as a whole hardly support such a view, however, hence the roots involved have been reconstructed without nasal increment, e.g., LEG/: P-Austro-Japanese *paqi rather than *pa(N)qi. As shown below (7.2), the nasal increment reconstruction has been reserved for stop > nasal shifts in Japanese.

An additional argument against the nasal increment origin of medial voiced stops in Japanese is furnished by the fact that the same kind of secondary voicing is also found with final stops + suffix (7.3), a position in which nasal increment is unknown in the Austro-Tai stock. This kind of voicing is to be compared with that seen in compounding, as in HAIR[I] and RISE/ (above), where it is to be taken as a feature of morpheme juncture.

As an over-all statement, it appears that unvoicing in Japanese affected most, if not all, medial along with initial stops, followed by secondary voicing in medial position. This last development is attested historically and has extended in later stages of the language even to the initials; cf. Fani 'red clay' > beni (with destressing) 'rouge'.

7.13 Stop reflexes - finals:

P-Austro-Tai *-p, *-t, *-[t,c], *-c, *-k, *-q > [0]

LIVE/: P-Austro-Tai *qubrip > udi (> uzi)
OFFAL: P-Austro-Japanese *[ts,tš]aRap > ara

NOISE/: P-Austro-Kadai *qo(n)tot > ötö
BIND/: P-Austro-Kadai *[t,C]a(m)ba[t,c] > taba
CHIN/: P-Austro-Japanese *dza(ŋ)go[t,c] > ago
HOLD TOGETHER/: P-Austro-Kadai *ka(m)pi[t,c] > kaFi

HAIR/: P-Austro-Tai *(n)[tsa,tš] a(m)boc > sawo

FISH/: P-Austro-Japanese *ʔiwak > iwo
NEST: P-Austro-Japanese *lisuk > su

CHEW/: P-Austro-Tai *mamaq > mama
COLD: P-Austro-Japanese *[ts,tš]a(m)puq > samu-
FAULT/: P-Austro-Japanese *(ň)tša[aq > ara

FLUID/: P-Austro-Japanese *dzuγuq > tuyu
PENIS/: P-Austro-Japanese *bo[t,C]oq > Fotö
SWAMP/: P-Austro-Japanese *[ts,tš]abaq > saFa ~ aFa

The voiced final stops are relatively uncommon in Austronesian/Austro-Tai and cognate sets (without suffix) are available only for the following:

P-Austro-Tai *-b, *-j, *-G > [0]

CROWDED/: P-Austro-Japanese *təγəb > töyö
NAVEL: P-Austro-Japanese *putsəj > Foso ~ Feso
LEAF: P-Austro-Kadai *paGpaG > Fa ~ Fappa

NOTE: Jp. Fappa reflects the reduplicated root, with the assimilative doubling: *Gp > /pp/ that is characteristic of the language; contrast MOTHER/: P-Austro-Kadai *papa > Fa ~ FaFa.

P-Austro-Tai *-d > /i/

STALK/: P-Austro-Japanese *kudkud > *kukui > kukï

The final *-d > /i/ shift here is one aspect of an over-all pattern of replacement of final dentals, including *-n, *-s, and *-z (but not *-l or *-t), by /i/; see 7.42, 7.61, and 7.62.

7.14 Stop reflexes - final + suffix:

The reflexes here are similar to those for medial stops, as anticipated with the exception or simple loss (> [0]) before verbal -ri, adjectival -si, and transitivizing -s-. In a few roots (below) both suffixed and unsuffixed forms occur.

P-Austro-Tai *-p + suffix > /p/ ~ /F/ (before *-i)

EMPTY (UNOCCUPIED)/: P-Austro-Kadai *ga[r,R]ap > kara (< *karap)
> karap-po
RECITE/: P-Austro-Japanese *[q,ʔ]ucap > uta (< *utap)
> utaF-i
SEIZE (WITH HANDS ~ TEETH)/: P-Austro-Kadai *(ŋ)kup(ŋ) kup > kuF-i
STITCH/: P-Austro-Japanese *ra(ń)jup > nuF-i
SUCK: P-Austro-Tai *(n)tsuptsup > suF-i
WASH/: P-Austro-Kadai *ʔaRap > araf-i

P-Austro-Tai *-p + suffix > /b/

ROW (BE IN): P-Austro-Japanese *(n)[t,C]arap > narab-i
CLAP/: P-Austro-Japanese *[SYL]top > tob-i

P-Austro-Tai *-p + suffix > [0]

EXCHANGE/: P-Austro-Japanese *[q,ʔ]u[r,R]up > ur-i (< *urï < *uru-i)

NOTE: The loss of *-p in this root appears to have been conditioned by the *-u - u vocalic pattern; cf. PUS (below).

P-Austro-Tai *-t + suffix > /t/

RISE/: P-Austro-Kadai *tśaka-t > kat-i

NOTE: The final *-t here represents an old suffixed element.

P-Austro-Tai *-t + suffix > [0]

FAST (BLOW)/: P-Austro-Japanese *(m)baγat > Faya- (OJ Faya-si)

P-Austro-Tai *-[t,c] > suffix > /t/

SHOULDER: P-Austro-Japanese *baḷika[t,c] > kat-a

P-Austro-Tai *-[t,c] > suffix > [0]

SHALLOW: P-Austro-Japanese *[q,ʔ]a[ts,tš]a[t,c] > së (< *sai) > asa- (OJ asa-si)
FLAT: P-Austro-Japanese *(n)daRa[t,c] > nara-s-i

NOTE: The Japanese doublet under SHALLOW (së) reflects secondary voicing before *-i: *sat-i > *sad-i > *sai-i > *sai; cf. the parallel voicing in SPREAD/ (below).

P-Austro-Tai *-c > suffix > /t/

HOLD/: P-Austro-Japanese *ramoc > mot-i

P-Austro-Tai *-k + suffix > /k/

BLOW (WITH MOUTH)/: P-Austro-Japanese *[ts,tš,tś]ibuk > Fuk-i
CALL (ANIMAL)/: P-Austro-Japanese *ŋak(ŋak) > nak-i
COOK/: P-Austro-Japanese *talak > yak-i
HIT/: P-Austro-Tai *(n)tak(n)tak > tatak-i

MOUNTAIN/: *l̥u[t,C]uk > tuk-a
OPEN/: P-Austro-Japanese *pil̥ak > Firak-i
PECK: P-Austro-Japanese *tuktuk > tutuk-i
POUND: P-Austro-Japanese *truk(truk) > tuk-i
REBEL/: P-Austro-Japanese *[s,š]amuk > sömuk-i
SHORT: P-Austro-Kadai *(m)pe(n)dlek > mizik-a
THRUST/: P-Austro-Tai *(n)tśuk(tśuk) > tuk-i
WIDE OPEN/: P-Austro-Kadai *labak > abak-i
> Fak-a

P-Austro-Tai *-k + suffix > /g/

BEAT/: P-Austro-Tai *pakpak > Fa (< *Fak)
> Fag-i
STRIP/: P-Austro-Kadai *bak(bak) > Fag-i
WASH/: P-Austro-Tai *(n)[ts,tš]u(n)[ts,tš]uk > susug-i ~ sosug-i

P-Austro-Tai *-g + suffix > /k/

BOIL/: P-Austro-Japanese *luwag > wak-i

P-Austro-Tai *-q + suffix > /k/ ~ /g/ ~ [0]

BREAK/: P-Austro-Japanese *rapuq > yabuk-i
> yabu-ri
CALM: P-Austro-Japanese *(n)[t,C]ə(n)doq > nödök-a
COLD/: P-Austro-Japanese *tsa(m)puq > samu- (OJ samu-si)
FOAM/: P-Austro-Tai *(m)pujaq > tak-i ~ taki ~ tagi
MOVE (FEET)/: P-Austro-Japanese *la(ŋ)kaq > agak-i
SPIT/: P-Austro-Japanese *tśu(m)paq > tuba (< *tubak)
> tubak-i (~ Fak-i)
SPITTLE/: P-Austro-Japanese *l̥udaq > yoda-ri

P-Austro-Tai *-q + suffix > [0]

PUS: P-Austro-Kadai *ʔumuq > um-i (< *umï < *umu-i)
TURN/: P-Austro-Japanese *(m-)wiḷiq > mï (< *mui)

NOTE: The loss of *-q in these two cognate sets is diverse in origin. In PUS, it appears to have been conditioned by the *u - u vocalic pattern; cf. EXCHANGE (above). In TURN/, on the other hand, the development was *m-wiḷiq > *mwiḷiq > *muḷiq > *mui, with loss of *ḷ after *u (7.72) and of *-q after the secondary *ui vowel cluster, which occurs only in final position (cf. YELLOW under 5.26); the verbal -i suffix was lost through coalescence with the root vowel *i.

P-Austro-Tai *-ʔ + suffix > [0]

EAT/: P-Austro-Tai *kaʔ-i > kë (< *kai < *ka-i)
*ma-kaʔ > makana-i (< *ma-ka-na-i)

The secondary voicing shown by medial stop reflexes also appears in final stop + suffix reflexes but rather less often. There is some suggestion of an association with reduplication: cf. BEAT/ and STRIP/; also (with ambiguous final stop reflex) CLAP/ and WASH.

7.20 Consonant cluster reflexes:

The evidence from mainland languages, especially from Tai and other Kadai languages, makes it necessary to reconstruct various *stop (or *m) + *l/ḷ/r clusters at the Proto-Austro-Tai level. These clusters, which occur only in initial or medial position constitute a major hurdle for the comparativist. To a considerable extent this merely reflects the fact that they have been simplified in Austronesian in one way or another, with only occasional traces of the original clusters (Benedict 1980). This means that one must rely almost exclusively on the Kadai or, at times, the Miao-Yao evidence, complicated as it has been by monosyllabization and the attendant feature of vocalic transfer along with the (relatively) recent unvoicing of initials. The writer made some provisional cluster

reconstructions in Benedict 1975:171–8 and has twice updated this work on the basis of more recent sources: for Saek (1979c) and for Mulao (1983a), along with additional Formosan data from Tsuchida 1976, et al. Much work remains to be done in this field, however, e.g., the key dialect (Da-wu) of Mulao, which maintains labial clusters to an unprecedented degree, is known only from a few forms. Strangely enough, Japanese has maintained some useful distinctions here as well as elsewhere, despite its generally simplified consonant system.

7.21 Reflexes for labial stop clusters:

The reflexes for this group of clusters are by far the best understood since two of the clusters occur in 'core of core' roots: DIE/END and EYE while the third is the initial of another widespread root: P-Austro-Tai *pl̥aŋi(t)s 'weep'. The reconstructions are based on the varying reflex patterns, which point to a primary distinction between one of the clusters (*pl̥) and the other two (*pl, *pr), with merging primarily of the latter pair, Lati alone showing a reversal (see Benedict 1979):

Table 5. Reflexes (Austro-Tai) for labial stop clusters

PAT	*PST*	*Saek*	*Lakkia*	*Lati*	*PHN*	*P-Paiwanic*	*P-Tsouic*	*P-Atayalic*
*pl	*t	pr	pl	ph	*t	*C	*c	*ts
*pr	*t	pr	pl	c	*t	*C	*c	*ts
*pl̥	*h	t	pi = py	c	*t	*C_1	*t	*l

PAT = Proto-Austro-Tai, PST = Proto-Southern Tai, PHN = Proto-Hesperonesian

It has long been realized that distinct labial clusters are to be reconstructed for the three basic roots cited above but specification of the details has remained a problem. A newly uncovered Austro-Tai root, which has P-Miao-Yao *r corresponding to P-Atayalic *l, has supplied a vital clue here, with results as charted above.[5] It is likely that the Proto-

Austro-Tai consonant scheme also included the voiced counterparts of these labial clusters but cognate sets in support of this view are in short supply. Saek, however, appears to reflect the three-way contrast, with th-^{L} < *d-from *b̥- (see cit. under ASHES in Benedict 1975:223), paralleling t-from *p̥- (see Table 5), ʔb- from *ʔbl- (in EARTH/) vs. ʔbl- from *ʔb-l- (F-K. Li 1977's *ʔbl/r-, as in MOON/MONTH, cited in 6.4) and r-^{H} from *ʔbr- (in LIVE/). Thus, the basic shifts indicated for Saek, to be compared with those cited in Table 5, are *bl > /b/, *br > /r/, and *b̥l > /th/ via *d, with the first of these attested only in the (secondary) nasal increment form for EARTH/. Both Kam-Sui and Li display some merging of reflexes, e.g., those shown by the several Li dialects for EARTH/ and LIVE/ are identical (see entries). In the Austronesian arena, Proto-Hesperonesian has *[d.] in both ASHES (Benedict 1975:223) and LIVE/, while Paiwan has /z/ in the latter, pointing to P-Austronesian *z, at least for the *br cluster. Japanese cognates are available for only four of the roots in this group:

P-Austro-Tai *pl > /t/

DIE/: P-Austro-Tai *pa-play > Fate(-ri)
EARTH/: P-Austro-Kadai *(m)plalaq > ta

P-Austro-Tai *pr > /i/

EYE: P-Austro-Tai *mapra > më ~ ma- (< *mai)

P-Austro-Tai *br > /d/

LIVE/: P-Austro-Tai *qubrip > udi (> uzi)

This is a small but highly select group of etyma, all of 'basic vocabulary' type and all but one (EARTH/) with representation at the earliest (Proto-Austro-Tai) level. The Japanese shift to dental stop is strikingly parallel to that found elsewhere in Austro-Tai, especially in

Hesperonesian, Tai, and Miao-Yao, with Miao-Yao also furnishing a parallel for the *pr > /i/ shift; cf. the following:

	PAT	*PHN*	*Siamese*	*PMY*	*Japanese*
die/end ~ kill	*(ma-)play	*matay	taay^{A}	*day^{C} *tay^{C}	Fate
earth/	*(m)plalaq	*tana? *tanə?	din^{A}	-	ta
eye	*mapra	*mata	taa^{A}	*may^{C}	më < *mai
live/	*qubrip	*?u[d.]ip	dip	*?yem^{A} ~ *ńem^{A}	udi

The Japanese /d/ reflex in LIVE/, paralleling the Siamese reflex, seemingly reflects the original voicing of the cluster although a secondary origin can hardly be excluded; cf. the voicing shown by Jp. /z/ as a reflex for *dl (7.23).

7.22 Reflex for labial nasal cluster:

Among the nasals, only *m appears to have entered into Proto-Austro-Tai consonantal clusters, paralleling the labial stop clusters. Again the comparative evidence is severely limited but highly select, in this case with two 'core vocabulary' roots involved: BIRD^{I} and SIX. In Benedict 1975 the former was reconstructed *mamlok at the Proto-Austro-Tai level on the basis of the Kadai evidence: Lakkia mlok, Kam mok, Siamese nok, et al., with Lakkia /ml/ paralleling the /pl/ reflex in DIE/ and EYE (7.21). The Mulao evidence (Benedict 1983a) now indicates that P-Austro-Tai *m̥l yielded simply /m/ in Lakkia (in root for 'ant' - see Benedict 1975:219), paralleling P-Austro-Tai *p̥l > Lakkia /pi/, with *ml or *mr to be reconstructed for BIRD^{I}. Gelao has /pl/ ~ /p/ < *pl in DIE, contrasting with /t/ < *pr in EYE, while for BIRD it has /nt/ < *n, the parallelism strongly indicating *mr rather than *ml for

the BIRD root. For SIX, on the other hand, Gelao has /ml/ ~ /n/, paralleling rather the DIE root, pointing to *ml for this numeral. The Japanese reflex for *m̥l cannot be determined in the absence of a relevant cognate set but both *ml and *mr appear to have shifted to *n, which regularly yielded *i:

P-Austro-Tai *ml ~ *mr > *n > *i

SIX: *ʔumləm
~ *[u]m-umləm > mui-
BIRD[1]: P-Austro-Tai *mamrok > -më (< *-mai)

7.23 Reflexes for dental stop clusters:

These clusters present even bigger problems in reconstruction than those with labial stops. The clusters themselves are not maintained in any Austro-Tai language, it appears, but can be reconstructed in a number of roots, often on the basis of the usual Proto-Austronesian reflexes: *[t.] and *[d.]. The mainland evidence indicates that these reflexes represent P-Austro-Tai *tl ~ *tr and *dl ~ *dr, respectively, with additional evidence for P-Austro-Tai *t̥l > P-Austronesian *C (Benedict 1975:176). The same evidence is useful in disambiguating between the medial -l- and -r-clusters, as in the roots (below) for BODY and SHORT.

P-Austro-Tai *tr > /t/

ONE/: P-Austro-Japanese *pitroŋ > Fitö
POUND: P-Austro-Japanese *truk(truk) > tuk-i

P-Austro-Tai *tr > /d/

BODY: P-Austro-Kadai *ba(n)traŋ > Fada

P-Austro-Tai *dl > /z/

SHORT: P-Austro-Kadai *(m)pe(n)dlek > mizik-a

The Japanese forms serve to disambiguate the initial cluster in the first pair of roots because of the parallelism with the /d/ reflex for BODY. The voicing shown by this reflex apparently represents the typical secondary voicing of medial stops (7.12), but one should note the optional nasal increment in the Proto-Austro-Kadai root. Finally, the Japanese /z/ reflex in the last root shows loss of the stop element before /l/, as contrasted with retention before /r/, along with apparent maintenance of original voicing (cf. *bl̥ > /d/ - see 7.21).

7.24 Reflexes for velar stop clusters:

Benedict 1975 presents evidence for velar clusters of several kinds but the reconstructions here present even greater problems than the foregoing. It does appear, in any event, that velar + *l clusters yielded affricates in Austronesian whereas velar + *r clusters yielded palatals. Atayalic shows some unusual reflexes (Benedict 1980), including Sediq k- ~ s- corresponding to P-South Formosan *C- in the BEAR root (see Glossary). This fact indicates that the P-Austro-Tai *kr- cluster was maintained at the Proto-Austronesian level, along with *gr- or the like (see 'seedling', below) and probably other clusters as well.[6]

P-Austro-Tai *kr > /k/

BEAR: P-Austro-Tai *kru(m)bay > kuma
HILL/: P-Austro-Japanese *po(ŋ)krak > woka ~ wo
RICE: P-Austro-Japanese *krumay > komë ~ kuma

P-Austro-Tai *kr- > /g/

HOOK: P-Austro-Japanese *ka(ŋ)kriŋ > kagi

The Japanese reflex here apparently represents typical secondary voicing of medial stops (cf. the /d/ reflex, above); the Proto-Austro-Japanese root here shows optional nasal increment but so does the root for HILL/, with voiceless /k/ as reflex.

P-Austro-Tai *kl > /k/

SPIT/: P-Austro-Japanese *kludzi > kusi

A medial *-gr- cluster is reconstructible for Proto-Austronesian in the key cultural root for 'rice plant': *pagr[ə]y, on the basis of P-Hesperonesian/P-South Formosan *paj[ə]y (cited in 6.6); Atayal pagay, Sediq payay, with 'unique' reflexes (Tsuchida 1976:256). The Austronesianists have at least recognized the cognation of these Atayalic forms (Tsuchida 1976 fails even to mention the Sediq forms for 'bear') but have not proposed any suitable reconstruction(s). Japanese has a likely cognate here but only in a compounded form: naFë 'seedling', with the na- element apparently from Jp. bena < P-Austro-Tai *buna ~ *bəna 'lowlands/' (see Glossary), the basic Austro-Tai root associated with wet rice agriculture. This etymology is supported by the parallel Paiwan derivative from *buna: vunavun '(field product =) rice seedling'. The remaining segment of the Japanese form is -ë, from *-Fai, which can well stand for an earlier *-Faii, with -i the regular reflex for *-əy (6.6). This leaves /i/ as the reflex for *gr, paralleling /i/ for *pr (7.21), contrasting with the *kr- > /k/ shift (above).

7.25 Reflex for *C:

In many roots the initial or medial has been reconstructed *[t,C] because of the lack of disambiguating data. Additionally, in two roots the reconstruction is simply *C, for the same reason, and here Japanese has /t/ as reflex.

P-Austro-Tai *C > /t/

DEICTIC/: P-Austro-Japanese *-Cu > tu
SPIRIT: P-Austro-Japanese *liCu > itu

7.30 Nasal increment reflexes:

As indicated above (7.0), units or clusters consisting of nasal + homorganic stop are absolutely characteristic of the Austro-Tai languages in general. The nasal increment is often optional, here written *(m)p, *(n)t, etc., and this variation often occurs within a group of languages, such as Tai or Hesperonesian, frequently yielding doublets, with or without distinction in meaning, e.g., P-Hesperonesian *t'ə(m)pa? 'chew out [betel]' > Ngadyu Dayak simpa 'chew betel' ~ sipa 'betel cud'. Haudricourt (1965b) and others have regarded these 'prenasalized' consonants as relative newcomers on the Austronesian scene in view of their scarcity in Formosan, yet the writer (1976) has shown that regular nasal increment reflexes can be set up for these languages (see Table 6 for Pazeh) while Biggs (1965) has reconstructed them for Proto-Oceanic as 'nasal grades'. Even more to the point, regular correspondences for these nasal increment units can be established for the mainland languages (Benedict 1975: table on p. 168), with initial nasal increment forms being especially characteristic of Miao-Yao. There is even evidence of nasal increment in association with affricates and sibilants, both with representation in Japanese (7.52, 7.63).

The nasal increment reflexes are often well disguised, especially in Hesperonesian, and this had led one Austronesianist (Prentice 1974) to reconstruct two *b's for Proto-Hesperonesian: *b_1 and *b_2. The basis for this is the correlation that he had noted between initial/medial reflexes in Kadazan and Timugun (Sabah: Idanan group) and in Javanese:

*b_1: Kadazan and Timugun /b/ = Javanese /b/
*b_2: Kadazan /v/, Timugun /b-[0]-/ = Javanese /w/

Prentice speculated that *b_1 may have been a voiced stop, *b_2 a voiced labial fricative, and Dahl (1976:131) appears to go along with this,

unlikely as it might appear. The solution, as pointed out in Benedict 1975:142, is to take the /b/ reflex in these languages as well as in Malagasy as representing the nasal increment form: *mb, with the anticipated lenition of the plain stop without nasal increment: *b; cf. Table 6.

There has been no dearth of speculation as to the origin(s) of nasal increment forms. One popular line of reasoning has the nasal element playing an 'intensive' role of some kind, but this idea is hardly supported by the available data, especially in view of the simple fact that in the vast majority of cases no semantic variation is involved in doublets with and without nasal increment. Biggs (1965) has interpreted these nasal elements as accretion products of archaic prefixes or infixes but, again, the comparative material fails to support this as a general hypothesis (Benedict 1975:171). It appears far more likely that nasal increment involves some distinctive articulatory feature of the stops and other consonants of the proto-language, e.g., glottalization. Blust (1980b) has pointed out what appears to be a correlation of sorts between nasal increment forms in Hesperonesian and glottalized forms in Chamic, e.g., Malay lomboŋ 'granary', Chamic ʔbuŋ 'loft'. In view of the wide distribution of the nasal increment forms, one would ordinarily go along with Blust here in regarding the glottalization as secondary, yet the possibility remains that the glottalized feature is the earlier. This possibility finds some support from the fact that the nasal increment reflex in Hesperonesian is often the doubled medial consonant, e.g., P-Hesperonesian *buŋkuk 'crooked' > Toba-Batak bukkuk.

The Chamic glottalization, if it is indeed a nasal increment reflex, is highly unusual if not unique. The most common shifts are to plain nasal or voiced stop, with a tendency for stops to be 'protected' when affected by nasal increment; cf. Samoan and Malagasy in the following table (adapted from Benedict 1975:170); Malagasy /b/ as initial (see above) and /mb/ as medial; Miao and Yao 'high' (< voiceless initial) series = ^{H}, 'low' (< voiced initial) series = ^{L}.

Table 6. Nasal increment reflexes:

Proto-Austro-Tai	*p	*mp	*b	*mb
Malagasy (Hesperonesian)	/f/	/(m)p/	/v/	/(m)b/
Samoan (Polynesian)	/f/	/p/	/f/	/p/
Pazeh (Paiwanic)	/p/	/b/	/b/	/m/
Proto-Tai	*p	*b	*b	*m
P-Eastern Miao	$*p^{H}$	$*p^{H}$	$*p^{L}$	*m
Proto-Yao	$*p^{H}$	$*b^{H}$	$*p^{L}$	$*b^{L}$

As can be seen from the above table, the Pazeh nasal increment reflexes are identical with those of Proto-Tai. Proto-Eastern Miao also shows the *mb > /m/ shift but simply drops the nasal element of *mp, without secondary voicing. Variations on the theme are manifold, with only a handful shown in Table 6. The nasal increment reflexes in other (non-labial) series are, in general, patterned along closely similar lines.

7.31. Japanese nasal increment reflexes:

Japanese is very fond of nasal increment reflexes, rivaling even Miao-Yao in this respect. Perhaps the fact that both Japanese and Miao-Yao typically make use of canonical reduction-right from disyllabic roots (5.20) has some bearing here. However that may be, the fact remains that Japanese makes extensive use of nasal increment reflexes, particularly in the labial series, to a degree that has tended to disguise the Austronesian/Austro-Tai affiliation of the language. It has been pointed out above (7.12) that the secondary voicing of medial stops in Japanese may be in part the product of prenasalization, as handled in Martin 1979, but that the lack of any over-all pattern of correspondences makes it impossible to regard these as nasal increment reflexes per se, in the sense that these are represented for Pazeh and Proto-Tai in Table 6. The true nasal increment reflexes in Japanese are the nasals, both for the voiced and voiceless series. The pattern, therefore, is distinct from any in that table and is to be connected with the general loss of voicing distinctions in the language (7.11–7.14).

7.32 Nasal increment reflexes - labial:

P-Austro-Tai *mp > /m/

COLD/: P-Austro-Japanese *[ts,tš]a(m)puq > samu-
DREAM: P-Austro-Tai *śi(m)pi > -siFi (Austronesian, Kadai)
*śi(m)p-an > imë
FILL: P-Austro-Japanese *(m)pəḷ(m)pəḷ > mör-i
GOD/: P-Austro-Kadai *(m)piḷi > Fi ~ -ri
> mi-
OPPOSITE SHORE/: P-Austro-Japanese *si(m)pa[r,R] > sima (Austronesian)
SHORT: P-Austro-Kadai *(m)pe(n)dlek > mizik-a
THIGH: P-Austro-Japanese *[q,ʔ](m)pəw((m)pəw) > momo
WIDE/: P-Austro-Kadai *(m)paŋ(m)paŋ > Fama
> mama
WINNOW/: P-Austro-Japanese *ta(m)pus > mï

P-Austro-Tai *mb > /m/

BEAR: P-Austro-Tai *kru(m)bay > kuma (Austronesian, Kadai)
BORDER/: P-Austro-Tai *(m)bir(m)bir > mimi (Austronesian)
BOTTOM/: P-Austro-Kadai *(m)bə(n)təŋ > mötö (Austronesian)
CHILD[II]: P-Austro-Japanese *(m)bu(n)tšu > musu- (Austronesian)
DEEP/: P-Austro-Tai *(n)[t,C]u(m)biγ > umi (< *u-mii)
DOWN/: P-Austro-Japanese *(n)[ts,tš]i(m)baw > simo
FEMALE/: P-Austro-Tai *(m)bəhi > -mi (Kadai)
*(m)bəhi-a > me (Kadai)
FLEA: P-Austro-Japanese *(n)[t,C]ombi > nomi (Austronesian)
FRUIT/: P-Austro-Kadai *(m)buway > mï (Austronesian, Kadai)
HAIR[II]: P-Austro-Kadai *qo(m)bitś > -mi (Austronesian, Kadai)
HUNDRED: P-Austro-Japanese *[γ,R]i(m)bəw > -bo
> momo

JUICE/: P-Austro-Japanese *(m)bidžuq > midu (> mizu)
PEAK/: P-Austro-Japanese *(m)bu(m)bu > Fu- (Austronesian) > mu-
ROUND: P-Austro-Kadai *(m)baḷuR > maru
WILDERNESS: P-Austro-Kadai *ra(m)ba > yama (Austronesian)

These labial nasal increment reflexes are, by a very large margin, more common than any of the other nasal increment reflexes in Japanese; in fact, this may well have been the most common source of Japanese initial and medial /m/. It is evident from the many doublets with and without nasal increment for DREAM, GOD/, WIDE/, HUNDRED and PEAK/, that nasal increment was optional in many roots at an early (pre-Old Japanese) stage of the language. Parallel nasal increment reflexes elsewhere in Austro-Tai are indicated above within parentheses. The large number of parallel nasal increment reflexes for *mb is especially worthy of note; in one of these roots (BEAR) Austronesian and Kadai both show only the /m/ reflex, with /b/ reconstructed on the basis of the Miao-Yao cognate, while in a second root (HAIR^{II}) the /m/ reflex is almost universal in Austronesian and Kadai, with /b/ supplied only by some of the Formosan cognates. This Japanese evidence, therefore, simply supports that from Austro-Tai as a whole regarding the special nature of *mb as an nasal increment feature in the stock.

Quite apart from the above, and in the reverse direction, is the well-attested /m/ > /b/ shift in a few Japanese words, notably Jp. Febi 'snake', OJ Fëmi, with -b- attested as early as the 10th century in a Heian lexical compilation (Miller 1967:295); Martin (1979) compares this word with Korean paymi 'id.', further supporting the /m/ > /b/ shift (possible early loan). This kind of shift is uncommon in the Austro-Tai stock in general and the explanation here seems to lie within Japanese itself. In at least one such case contamination seems to have played a role: Jp. abu 'horse-fly', OJ amu; cf. buto ~ buyu 'id.' (neither form cited in Ōno et al. 1982). OJ amu has a possible cognate in P-Hesperonesian *ńamuk 'gnat', P-Polynesian *namu 'mosquito'; an early doublet form of this shape, with dissimilative initial *l-, could have yielded Jp. amu (the *l- > [0] shift is regular; see 7.71).

7.33 Nasal increment reflexes - dental:

P-Austro-Tai *n[t,C] > /n/

CALM: P-Austro-Japanese *(n)[t,C]ə(n)doq > nödö ~ nödök-a
FLEA: P-Austro-Japanese *(n)[t,C]ombi > nomi
ROW (BE IN): P-Austro-Japanese *(n)[t,C]arap > narab-i

P-Austro-Tai *nd > /n/

FLAT: P-Austro-Japanese *(n)daRa[t,c] > nara-s-i
PLACE/^{II}: P-Austro-Tai *(n)di > ni (Austronesian)

No cognate sets are available for disambiguated *nt. As in the labial group (7.32), nasal increment reflex parallels elsewhere are more likely to appear in the voiced set.

7.34 Nasal increment reflexes - consonant cluster:

P-Austro-Tai *nC > /n/

GREEN/: P-Austro-Japanese *(n)Cama > nama ~ na

P-Austro-Tai *ndl > /n/

INTERROGATIVE^{I}: P-Austro-Kadai *(n)dlaya > na- (Kadai)

P-Austro-Tai *ŋkl > /n/

DOG: P-Austro-Tai *wa(ŋ)klu > wenu ~ inu

As in the labial and dental groups, the nasal increment reflex parallel here appears in the voiced set.

7.35 Nasal increment reflexes - palatal:

P-Austro-Tai *ńj > /n/

NAME: P-Austro-Kadai *ʔ(ń)ja(-n) > na ~ -ne (Austronesian)
SIBLING (OLDER): P-Austro-Kadai *ʔa(ń)ji > Rk. ati
> ani ~ ane
(Austronesian, Kadai)
STITCH/: P-Austro-Japanese *ra(ń)jup > nuF-i

No cognate sets are available for the rare *ńc. As in the above groups, this voiced set shows prominent nasal increment reflex parallels elsewhere in Austro-Tai. The Japanese/Ryukyuan doublet for SIBLING (OLDER) shows that nasal increment was optional in this root at the Proto-Japanese-Ryukyuan level while further serving to establish the earlier meaning of 'older sibling'.

7.36 Nasal increment reflexes - velar:

P-Austro-Tai *ŋk > /n/

CRAB: P-Austro-Japanese *ga(ŋ)ki > kani
I: P-Austro-Tai *(ʔu-)a(ŋ)ku > Rk. *(w-)anu (Miao-Yao)
ROOT: P-Austro-Japanese *ʔa(ŋ)kaz > ne

No cognate sets are available for *ŋg or for the postvelars.

7.40 Nasal reflexes:

Japanese has reduced the four Proto-Austro-Tai nasals: */m n ń ŋ/ to just /m/ and /n/, the latter inordinately overworked, as can be seen from the nasal increment reflexes presented above. The nasal finals pattern like the stop finals (7.13, 7.14), with retention only before suffixes along with dental (*-n) > -i shift.

7.41 Nasal reflexes - labial:

P-Austro-Tai initial/medial *m > /m/

BIRD[I]: P-Austro-Tai *mamrok > -më
CHEW: P-Austro-Kadai *ma(q)maq > mama
EAT/: P-Austro-Tai *ma-ka? > maka-
EYE: P-Austro-Tai *mapra > më
RICE/[II]: P-Austro-Japanese *mami > momi
SNAIL: P-Austro-Kadai *munaḷ > mina (> nina)

ACCOMPANY/: P-Austro-Kadai *[t,C]əma[n,l] > tömö
ANCESTORS/: P-Austro-Kadai *k-amu-i > kamï
FATHER/: P-Austro-Japanese *t-ama > tama
FIELD (DRY)/: P-Austro-Japanese *qumahqumah > umo
HIT (MARK): P-Austro-Kadai *[t,C]ama > ma-
HOLD/: P-Austro-Japanese *ramoc > mot-i
RICE: P-Austro-Japanese *krumay > komë ~ kuma

P-Austro-Tai final *-m > [0]

RASH (SKIN): P-Austro-Japanese *gušam > kusa

P-Austro-Tai final *-m + suffix > /m/

COLLECT/: P-Austro-Kadai *[SYL]tšum > tum-i
DRINK: P-Austro-Japanese *[q,?]inom > nöm-i
HOLD (IN HAND ~ MOUTH)/: P-Austro-Tai *kamgam > kam-i
PLAIT: P-Austro-Japanese *[q,?]ańam > am-i
TASTE/: P-Austro-Kadai *ńa?am-an > namë

7.42 Nasal reflexes - dental:

P-Austro-Tai initial/medial *n > /n/

INTERROGATIVE[II]: P-Austro-Kadai *-nu > Rk. nuu
LOWLANDS/: P-Austro-Kadai *buna ~ *bəna > Fena
SAND: P-Austro-Japanese *xunay > suna
SNAIL/: P-Austro-Kadai *munaḷ > mina (> nina)
SOUND: P-Austro-Japanese *šuni > ne

P-Austro-Tai final *-n > *-i

BACK: P-Austro-Kadai *[SYL][ts,s]an > se (< *sai)
BAMBOO: P-Austro-Japanese *batakan > takë (< *takai)
DREAM: P-Austro-Tai *śi(m)p-an > imë (< *imai)
PLANT: P-Austro-Kadai *[ts,tšuwan > suwa- (< *suwai)
> uwe- (< *uwai)
TASTE/: P-Austro-Kadai *ńaʔam-an > namö (< *namai)

P-Austro-Tai final *-n > [0]

FISH/: P-Austro-Japanese *śikan > ika
HOLE/: P-Austro-Japanese *[q,ʔ]anan > ana
HOUSE: P-Austro-Kadai *[d,dz]aγan > ya
TOOTH: P-Austro-Tai *(N)Gi(m)pan > Fa

P-Austro-Tai final *-n + suffix > /n/

DIE/: P-Austro-Kadai *[SYL][ts,s]in > sin-i

The replacement of final *-n by *-i, paralleling that of final *-d by *-i (7.13), is part of an overall pattern involving also final *-s (7.61) and *-z (7.62). The loss of *-i (> [0]) in four roots (FISH, HOLE/, HOUSE, TOOTH) relates to the canonical reduction phenomenon (5.22).

P-Austro-Tai final *-[n,l] > /n/

ACCOMPANY/: P-Austro-Japanese *təma[n,l] > tömö
CLAN/: P-Austro-Japanese *kaba[n,l] > kaba-

Inasmuch as final *-n can yield [0] as well as *-i, as shown above, the 'zero' final in these two roots cannot safely be used to disambiguate in favor of final *-l.

7.43 Nasal reflexes - palatal:

P-Austro-Tai *ń > /n/

TASTE/: P-Austro-Kadai *ńaʔam-an > namë

P-Austro-Japanese/P-Austro-Tai medial *-ń- appears to have been assimilated to final *-m in PLAIT (cited under 7.41). The parent language (Proto-Austro-Tai) lacked final *-ń, on the basis of the same lack in both Proto-Austronesian and the mainland families (Proto-Kadai, Proto-Miao-Yao).

7.44 Nasal reflexes - velar:

P-Austro-Tai initial/medial *ŋ > /n/

CALL (ANIMAL): P-Austro-Kadai *ŋak(ŋak) > nak-i
HORN: P-Austro-Japanese *tśuŋəw > tuno

NOTE: Cf. also 'alligator' in FISH - Note.

P-Austro-Tai final *-ŋ > [0]

BELLY: P-Austro-Japanese *ba[r]aŋ > Fara
BODY: P-Austro-Kadai *ba(n)traŋ > Fada
BOTTOM/: P-Austro-Kadai *(m)bə(n)təŋ > mötö
BUSH/: P-Austro-Japanese *rabuŋ > yabu
HOOK: P-Austro-Japanese *ka(ŋ)kriŋ > kagi

MORTAR: P-Austro-Japanese *lutsuŋ > usu
PAIR/: P-Austro-Japanese *patśaŋ > Fata
RIBS: P-Austro-Japanese *baRaŋ > abara (< *a-bara)

P-Austro-Tai final *-ŋ > *-i

BORE/: P-Austro-Kadai *təbuŋ > toFï (< *toFui) ~ Fï (< *Fui)
GRIP/: P-Austro-Japanese *taŋtaŋ > te (< *tai) ~ ta-
OPENING/: P-Austro-Kadai *tu(m)buŋ > tubï (< *tubui)
SIDE (OPPOSITE)/: P-Austro-Kadai *ta(m)baŋ > taFë (< *taFai)
RICE/[1]: P-Austro-Tai *śinaŋ > ine ~ -sine (< *inai ~ -sinai)

An inspection of these five cognate sets quickly reveals the conditioning factor: the final *-i is from an earlier *-n, as analyzed above (7.42), and the *-n from an original *-ŋ through assimilation to initial *t- or medial *-n- (probably also to initial *n-, but cognate sets of this shape are lacking). It should be noted that this conditioning factor was not operative with medial *-t- (see BOTTOM/, above) nor with medial *-tr- (see BODY, under 7.23). In view of the great regularity displayed here, the single possible counterexample has been excluded from the Glossary: P-Hesperonesian *taruŋ ~ *təruŋ (destress doublet) 'cylindrical', a somewhat fanciful gloss in Dempwolff 1938 based on 'eggplant' (Malay) ~ 'sea-cucumber' (Javanese); V_1 = *a is indicated by Philippine forms for 'eggplant': Tagalog taloŋ; Cebuano, Bikol taluŋ; Isneg, Ibanag taruŋ; Jp. taru 'barrel'.

7.50 Affricate reflexes:

Dempwolff's consonantal system for Proto-Hesperonesian/Proto-Malayo-Polynesian includes *t', typically represented by /s/, but not *s, mainly on the grounds that this phoneme can be affected by nasal increment, which that scholar associated exclusively with stops. In the Formosan languages, however, the frequent /t/ ~ /ts/ ~ /dz/ reflexes point to a stop element in the phoneme, thereby supporting Dempwolff's

reconstruction to some degree, and Dahl (1976:77) takes the Formosan reflexes into consideration in arriving at the conclusion that this phoneme was an original palatal affricate. In Benedict 1975:158 the writer made use of the reconstruction *ts, which is supported by the mainland evidence. Dyen employed *s as a symbol at the Proto-Hesperonesian/Proto-Malayo-Polynesian level and later, when he came upon the 'real' *s reflexes in Formosan (7.60), he employed the formulaic *S for them while continuing to use *s for what was now clearly an affricate, thereby creating no little confusion for the non-specialist.

7.51 Affricate reflexes - *ts vs. *tš:

In recent years it has come to light that two sets of reflexes are involved: $*ts_1 = *s_1$ (Dyen) and $*ts_2 = *s_2$ (Dyen); cf. the following correspondences as presented by Tsuchida (1976:127), who uses *s for $*s_1$, *[theta] for $*s_2$:

Table 7. Proto-Austronesian $*s_1$ and $*s_2$ reflexes

	Malagasy	*Maanyan*	*Kanakanabu*	*Rukai Saaroa*	*Rukai Budai*	*Rukai Maga*	*Rukai Tona*	*Rukai Mantauran*
$*s_1$	[0],s	h	[0]	[0]	[0]	s	s	[0]
$*s_2$	s	s	s	s	[theta]	[theta]	[theta]	s

NOTE: Malagasy /s/ reflex of $*s_1$ preceding or following *i.

Malagasy and Maanyan (Borneo) are both Hesperonesian languages, whereas Kanakanabu, Saaroa, and Rukai (four dialects) are all Formosan; hence the distinction must be set up at the Proto-Austronesian level. Tsuchida (1976:131) also reconstructs $*[theta]_1$ as a variety of *[theta] on the basis of special Paiwanic reflexes: Paiwan, Ami /s/ and Puyuma [0] for the anticipated Paiwan /t/, Ami /ts/, and Puyuma /s/, respectively, represented only in the Proto-Austronesian root for 'nine' (cf. Benedict 1975:215–6). These Formosan reflexes, of *s type (cf. Table 8), have also now turned up in other roots where Proto-

Hesperonesian has *t′, both as initial (SPIT/, THRUST/) and as final (HAIR^{II}). In a fourth root (TWO), apparently without Malayo-Polynesian representation, the Japanese /t/ reflex points to an original affricate (see below). This furnishes ample confirmation of Tsuchida's additional phoneme: *[theta]$_1$, here designated as P-Austronesian *ts$_3$, in distinction to *ts$_2$ = Dyen's *s$_2$ and *ts$_1$ = Dyen's *s$_1$.

This over-abundance of affricates is matched by an even greater plethora of sibilants (see 7.60) and the problem of non-formulaic reconstruction naturally arises. The Japanese reflexes are most revealing here inasmuch as both *ts$_1$ and *ts$_2$ are represented by /s/ ~ /z/ whereas *ts$_3$ is represented by /t/. The evidence as a whole suggests the setting up of a dental affricate (*ts) for *ts$_1$ and a palatal (*tś) for *ts$_3$, along with an alveolopalatal (*tš) for *ts$_2$.

P-Austro-Tai *ts > P-Austronesian *ts$_1$ ~ Jp. /s/

MORTAR: *lutsuŋ > *luts$_1$uŋ ~ usu
NAVEL: *putsəj > *puts$_1$əj ~ Feso ~ Fozo
ONE: *ʔitsa > *ʔits$_1$a ~ iza- ~ -s(-o)
PNM (see 9.24): *tsi- > *ts$_1$i- ~ si-
WEAK/: *lu(n)tsu > *lu(n)ts$_1$u ~ usu-

P-Austro-Tai *tš > P-Austronesian *ts$_2$ ~ Jp. /s/

CHILD^{II}: *(m)bu(n)tšu > *(m)bu(n)ts$_2$u ~ musu-
FLESH: *tšitši > *ts$_2$its$_2$i ~ sisi
SUCK: *(ń)tšuptšup > *[ts$_2$]up[ts$_2$]up ~ suF-i

P-Austro-Tai *tś > P-Austronesian *ts$_3$ ~ Jp. /t/

SPIT/: P-Austro-Japanese *tśu(m)paq > *ts$_3$u(m)paq ~ tubak-i ~ tu(ba)
THRUST/: *(ń)tśuk(tśuk) > *(n)ts$_3$uk(ts$_3$uk) ~ tuk-i
TWO: *putśa > *pu[ts$_3$]a ~ Futa-

In view of the regularity displayed by these reflexes, the most likely counterexample has been excluded from the Glossary: P-Austronesian *qasil = *qats$_{1}$il 'salt' (Tsuchida 1976:128), also (Malagasy) 'savor'; Jp. azi, OJ adi 'flavor'; for the semantics, cf. English *salty* = 'flavorful' (fig.).

The mainland languages are presently of limited help in establishing early affricate distinctions inasmuch as the phonology is poorly known and few cognate sets are available. Gelao: Gao, however, has si^{A} < *ʔitsa 'one' (through vocalic transfer via *sia) as opposed to ci^{B} ci^{A} < *tśitśi 'breast', as established by Jp. titi, thus furnishing support for the *ts vs. *tś distinction at the Proto-Austro-Kadai level.

In many roots the Austronesian reflexes are ambiguous and the Proto-Austro-Japanese (or earlier) reconstructions must be based on the Japanese reflexes, e.g., P-Austro-Japanese *([n,ń])[ts,tš]up[ts,tš]up > Jp. suF-i 'suck', P-Austro-Japanese *tśuŋəw > Jp. tuno 'horn' (but see Note 2 on HORN).

Secondary voicing of *ts produced Japanese /z/ as a medial in two roots: NAVEL and ONE (see above). Two other roots: PLANT and SWAMP/ exhibit an initial s- ~ [0] variation, indicating that secondary voicing has in some instances yielded loss of initial in Japanese (/z/ does not occur as an initial). Two other roots: FAULT and OFFAL are represented only by zero-initial forms; the /tš/ reconstructed for FAULT/ shows that, as anticipated, both *ts and *tš were subject to this development. In the case of the third affricate, *tś, with /t/ rather than /s/ as the Japanese reflex, secondary voicing would be expected to have yielded /d/ rather than /z/, but no examples of this kind have yet been uncovered.

P-Austro-Tai initial *ts- ~ *tš- > s- (~ [0])

FAULT/: P-Austro-Japanese *(ń)tšaḷaq > ara
OFFAL: P-Austro-Japanese *[ts,tš]aRap > ara
PLANT: P-Austro-Kadai *[ts,tš]uwan > suwa- ~ suwe > uwa- ~ uwe
SWAMP/: P-Austro-Japanese *[ts,tš]abaq > saFa > aFa

7.52 Affricate nasal increment reflex:

There is some evidence (Benedict 1975:170) that affricates as well as stops can be affected by nasal increment. Japanese has two pairs of allofams showing initial s- ~ n- variation, the latter to be taken as the nasal increment reflex.

P-Austro-Tai *[n,ň][ts,tš] > /n/

DOWN/: P-Austro-Japanese *([n,ň][ts,tš]i(m)baw > simo > ni-
SHELLFISH: P-Austro-Japanese *([n,ň][ts,tš]i[ts,tš]i > sizi- > nisi

7.53 Affricate reflexes - *dz vs. *dź:

In an early (1951) paper Dyen pointed out that Hesperonesian has two sets of reflexes for Dempwolff's *d′ = *z (Dyen), one of which is typically represented in Dempwolff 1938 by *d′ ~ *d/[d.]- doublets = Dyen's formulaic *Z. Dahl describes the complexities in this field at some length (1976:76–85), finally accepting both *d′ and *Z, vaguely characterized by him as 'palatals'. The relevant Formosan evidence, presented in detail by Tsuchida (1976:153–8), shows widespread merging of these phonemes with each other as well as with *z (see 7.62) and even with *d and *[d.].

As in the case of the voiceless affricates (see 7.52), the Japanese reflexes here are most revealing, with /s/ for Dyen's *z = *dz_1 and /t/ for Dyen's *Z = *dz_2, to be reconstructed as *dz and *dź, respectively. It is likely that the Proto-Austro-Tai scheme also included alveolopalatal *dž, paralleling *tš, but evidence for a third phoneme here has not yet been presented by Austronesianists. The parallel with the voiceless affricates also extends to initial loss via secondary voicing to *z, with GREEN/ presenting an /s/ ~ [0] doublet (from a secondary *dzaw + suffix -see 9.42).

P-Austro-Tai *dz > P-Austronesian *dz_1 ~ Jp. /s/ ~ [0]

CHIN: *dza(ŋ)go[t,c] > *dz_1aŋgut ~ ago
GREEN/: *hidzaw > *[h]idzaw ~ -sao ~ ao
SPIT/: *kludzi > *$ts_{123}$$udz_1$i ~ kusi

P-Austro-Tai *dź > P-Austronesian *dz_2 ~ Jp. /t/

FLUID/: *dźuγuq > *dz_2uγuq ~ tuyu ~ ti (< *tui)
MOUTH: *gu(ń)dźuy > *ŋu[d,dz_2]uy ~ kuti ~ kutu-

In MOUTH the disambiguating (from *dz_1) reflex is supplied by P-Rukai *d, which also stands for P-Austronesian *d; the P-Miao-Yao *(ń)dź, however, disambiguates in favor of the affricate (with variable nasal increment) and also supports the palatal feature (*dź).

In a sixth cognate set, with Austronesian representation only in Atayal, the Proto-Austro-Japanese reconstruction must be based on the Japanese cognate:

JUICE/: P-Austro-Japanese *(m)bidźuq > midu (> mizu)

Miller (1967:294) cites OJ mitu as a doublet, supporting the conclusion that the voicing is secondary in this root, with /t/ remaining as the basic Japanese reflex here.

7.60 Sibilant reflexes:

Paiwan /s/ is a member of no fewer than eight in a total of nine (!) Austronesian sets of voiceless sibilants, symbolized in the Dyen-Tsuchida scheme (Tsuchida 1976:159–62 and App. I - Table) by *S_1 through *S_6, *x_1 and *x_2, *X. As pointed out by Dahl (1976:32–5), one can hardly expect the proto-language to have distinguished among nine different sibilants, hence his effort to reduce the number through conditioning factors, without much success.

As indicated by the symbols, a primary contrast exists between the *S reflexes, all with /h/ reflexes in Hesperonesian (best maintained in Tagalic; generally [0] as final) and the *x and *X reflexes, with /ʔ/ ~ [0] reflexes in Hesperonesian. Blust (1969) has presented data from Borneo languages indicating that *S was maintained as /s/ at some early Proto-Hesperonesian/Proto-Malayo-Polynesian level, before the shift to /h/ (see HAIR[1]). More recently (1980a) he has supported the finding by Zorc (1981) that *S did not merge with 'zero' in absolute final position in Proto-Malayo-Polynesian, summing up with the declaration (p. 22) that 'PAN *S became PMP *h only in final position, but remained a sibilant elsewhere'. Within the *S group, the $*S_1$, $*S_3$, and $*S_6$ reflexes are almost identical (the $*S_6$ is set up in Tsuchida 1976 only for a Saaroa /s/ reflex, with the $*S_2$ reflexes rather different, in general, while the $*S_4$ and $*S_5$ reflexes occur only in initial position and appear to be rather marginal in the system as a whole.

The sibilant reflexes in Austronesian thus can be viewed as showing a primary *S vs. *x/X dichotomy, along with a secondary $*S_1/S_3/S_6$ vs. $*S_2$ division. This suggests the reconstruction of dental (*s) vs. alveolopalatal (*š) vs. palatal (*ś), paralleling the affricate/stop series, with Japanese reflexes as shown in the following table:

Table 8. Austronesian/Japanese sibilant reflexes

	$*S_1$	$*S_3$	$*S_6$	$*S_5$	$*S_4$	$*S_2$	$*x_1$	$*x_2$	*X
Hesperonesian/Malayo-Polynesian									
Tagalic	h	h	h	h	h	h	?/[0]	?/[0]	?/[0]
Atayalic									
Atayal	s	s	s	-[1]	-	h	h[2]	s	s
Sediq	s	x	s	-[1]	-	x	-[2]	s	s
Tsouic									
Tsou/Kanakanabu	s	s	s	-	-	[0]	[0]	s	s
Saaroa	[0]	[0]	s	-	-	[0]	[0]	[0]	[0]
Paiwanic									
Paiwan	s	s	s	-	s	s	s	s	s
Puyuma	[0]	[0]	[0]	[0]	s	[0]	[0]	[0]	[0]
Rukai[3]	s	s	s	-	-	[0]	[0]	[0]	s

Ami	s	s	s	ʔ	h	h	h	s	s
Bunun	s	s	s	ʔ	s	[0]	s	s[4]	[0]
Saisiyat	ś	ś	ś	h	-	h	h	ś	ś
Pazeh	s	s	s	-	h	h	h	s	s
Thao	ś	ś	ś	[0]	-	[0]	ʔ	[s][5]	h
Japanese									
Initial			s	s				y	*y
Medial					s/*y			s	s
Final	i								
PAT/PAJ	*s	*s			*š			*ś	*š

NOTES

1. Tsuchida 1976:160 gives /j/ as the Atayalic reflex but P-Atalic *ʔiyup 'blow' is from the doublet (see Glossary). Sediq has the form: miyuk < *m-[ʔ]iyup, corresponding to Atayal: Squliq miyup.

2. Tsuchida 1976:309 gives [0] as the reflex for both Atayal and Sediq but loss of SYL-1 is involved rather than shift to [0]; in FIRE, however: P-Austronesian *$x_1$apuy, the Atayal: Mayrinax dialect has hapuy.

3. Rukai: Maga and Tonan dialects.

4. Tsuchida 1976:308 gives [0] as reflex but only loss of SYL-1 is involved (P-Austronesian *$x_2$apat 'four' > Bunun pat); the /s/ (~ /ś/) reflex appears in FISH/ (see entry).

5. Tsuchida 1976:308 gives [0] as reflex but only loss of SYL-1 is involved: (Thao pa:t 'four'); the dropped SYL-1 had /s/, however, in the 1874 recording cited in Ferrell 1969: spat.

7.61 Sibilant reflexes - *s vs. *š vs. ś:

P-Austro-Tai initial/medial *s > /s/

BLOW/: P-Austro-Tai *siyup (*S_5-) > -si

OPPOSITE SHORE/: P-Austro-Japanese *si(m)pa[r,R] (*S_6-) > sima

STEEP/: P-Austro-Japanese *sipaḷ (Sai. ś-) > soba

NEST: P-Austro-Japanese *lisuk (*-S_6-) > su

NOTE: See the Glossary for the initial of BLOW/, involving complex variation. In the STEEP/ cognate set, Sai. ś- reflects P-Austronesian *x_2 ~ *X as well as *S_{136} (see Table 8) but the initial is disambiguated by the Japanese /s/ reflex.

The initial cannot be disambiguated in the following:

REBEL/: P-Austro-Japanese *[s,š]amuk (P-Hesperonesian *h-) > sömuk-i

P-Austro-Tai final *-s > *-i

HAIR[I]: P-Austro-Japanese *bukas (*-S_1) > kë (< *kai)
WINNOW/: P-Austro-Japanese *ta(m)pus (*-S_{13}) > mï (< *mui)

The final cannot be disambiguated in the following:

STAR: P-Austro-Japanese *buxi[s,ś] (Ami -s) > Fosi (< *Fosii)

P-Austro-Tai *š > /s/ ~ *y (before *i)

RASH (SKIN): P-Austro-Japanese *gušam (*-S_2-) > kusa
TREE: P-Austro-Japanese *kašiw (*-S_2-) > kë (< *kai < *kayi) > kï (< *koi < *koyi [destressed])

P-Austro-Tai *ś > /y/ (initial)
> /s/ (medial)

BAIT: P-Austro-Japanese *śa-śapa (*x_2-) > yosa (dial.) (with destressing)
DREAM: P-Austro-Tai *śi(m)p-an (*X-) > imë (< *yimai)
*śipi > -siFi
FISH/: P-Austro-Tai *śikan > ika (< *yika)
FOUR: P-Austro-Kadai *śəpat (*x_2-) > yö-
RICE/[1]: P-Austro-Tai *śinaŋ (P-Miao-Yao *h-) > ine (< *yinai) ~ ina-
> -sine (< *-sina)
> yöne (< *yönai [destressed])

NOTE: The *y is lost after w- (< *u-) before the destressed /e/ vowel in the standard forms for BAIT; see Note 2 on that entry.

The basic Japanese reflexes: /s/ and /y/ nicely support the PAT *s vs. *ś distinction suggested by the Austronesian reflexes alone, with the vowel-conditioned /s/ ~ *y reflexes for P-Austro-Tai *ś fitting with the intermediate nature of that sibilant phoneme. It appears that *ś underwent secondary voicing to *ź an initial, with later replacement by /y/. One cognate set illustrates similar secondary voicing of *s- in initial position, with replacement by 'zero' as in *ts and *dz (7.51, 7.53).

P-Austro-Tai initial *s- > [0]

MORNING/: P-Austro-Japanese *sasu ($*S_{136}$ - $*S_{136}$) > asu ~ *sasa > asa

Finally, secondary voicing of *s in medial position is perhaps represented by Jp. waza 'work, deed, act, performance, trick', a word with marked polysemy (Ōno et al. 1982 gives nine definitions). If the semantic development here was from an early core meaning of 'duplicity', the word might well represent the basic Proto-Austro-Tai root for 'two': P-Austro-Tai *drawasa > P-Austronesian *[d.]awasa > (through destressing) *[d.]əw[a]sa (Tsuchida 1976:153 cites $*D_1əS_3a$); cf. Jp. Futakokoro '(two hearts =) duplicity', English *doubleness* = 'duplicity'. A displacement of this kind in the basic word for 'two' would account for the extension of Jp. Futa- 'two' from an original meaning of 'two in a series' (see TWO in Glossary) to the generalized 'two'. Jp. waza, if indeed cognate as it appears to be, with regular canonical reduction-left development (5.26), supplies additional confirmation of a trisyllabic Proto-Austro-Tai root here, the Austronesian forms of which have been the subject of special papers both by Dyen (1947, 1974) and Blust (1974). Each of these linguists has attempted, without success, to cram the relevant forms into the conventional disyllabic mold, even to the point (Dyen) of setting up the Proto-Austronesian root with a non-canonical *-wS- cluster: *[d.]əwSa,

leading to its rejection by Dahl (1976:56–7). The main 'sticking point' is the reduplicated Tg. dalawa (/l/ < medial *[d.]), with forms elsewhere of *[d.]usa < *[d.]əw[a]sa type, all fitting without difficulty into a *[d.]awasa prototype. Even better, the indicated P-Austro-Tai *drawasa explains many of the diverse forms for this numeral in Kadai, e.g., N. Li trau, Laha sa, and, in the Miao-Yao family, notably Na-e wa.

7.62 Sibilant reflexes - *z:

As in the other consonant series, the voiced sibilants are, at best, uncommon in Austro-Tai. *D_2 in the Dyen/Tsuchida scheme (Tsuchida 1976:153– 4), with /z/ as reflex in both Paiwan and Puyuma, clearly can be fitted into the Proto-Austronesian system at the *z slot, but the mainland evidence for it is minimal and largely indirect (cf. Benedict 1975:159; also WORM/). A Formosan-only *D_4 is also reconstructed by Tsuchida (1976:155), differing only in the Paiwan reflex: /[d.]/ (the regular reflex for P-Austronesian *[d.]); it has been identified in several roots, in initial or medial position only, and could well represent P-Austronesian *ź (or less likely *ž). No extra-Austronesian cognate sets involving these roots have been uncovered to date.

For the Japanese correspondences three cognate sets are available, two in medial position (one with secondary voicing) and the other in final position, with regular -i replacement of the dental *-z, paralleling the same development seen with final *-d (7.13), *-n (7.43), and *-s (7.61).

P-Austro-Tai initial/medial *z > /s/ ~ /z/

BACK/: P-Austro-Japanese *huzi > usi-rö
WORM/: P-Austro-Kadai *[q,ʔ]u(n)zəy > uzi

NOTE: In both roots Formosan cognates are lacking, hence the Proto-Austronesian reconstructions are based on Proto-Hesperonesian forms.

P-Austro-Tai final *-z > *-i

ROOT: P-Austro-Japanese *a(ŋ)kaz > ne (< *nai)

7.63 Sibilant nasal increment reflexes:

Japanese has two sets of allofams pointing to /n/ as an affricate nasal increment reflex (7.52) as well as a single form that indicates the same /n/ reflex for the rarer sibilant nasal increment reflex (see Benedict 1975:170 and the Austronesian and Tai doublets under WORM/).

P-Austro-Tai *nz > /n/

IN(SIDE): P-Austro-Japanese *(n)zaya > na-

NOTE: This correspondence is greatly strengthened by the fact that Proto-Kadai has *(n)z-, which yielded a doublet form with initial *n- in Southern Tai.

7.70 Liquid reflexes:

One of the Formosan surprises awaiting Austronesianists was the fact that in many roots P-Hesperonesian/P-Malayo-Polynesian medial/final *n is represented by some variety of /l/ in most languages, along with /n/ in Bunun and Kabalan (both Paiwanic) and Kanakanabu (Tsouic). This required the setting up of a new Proto-Austronesian phoneme, of course, and Dyen unfortunately adopted a formulaic *N to symbolize it. He later changed this to *L, which at least got him into the right category of sounds: laterals. One might have assumed that it was a 'front' (dental) as opposed to a 'back' (alveolopalatal or velar) /l/ that gave rise to the /n/ reflexes both in Proto-Hesperonesian/Proto-Malayo-Polynesian and Formosan, and the Formosan reflexes (Table 9, below) show precisely this. On the mainland, the Miao-Yao languages reflect a basic alveolodental vs. retroflex /l/ contrast: P-Miao-Yao *l, *?l, *hl, *pl, et al. vs. *ɭ, *?ɭ, *hɭ, *pɭ, et al. The Kadai reflexes are complex, as always in this family, and made more so here by the fact that both /l/'s

enter so often into secondary consonant clusters, with or without vocalic transfer (see Benedict 1975:164–9). It appears that Proto-Tai itself had *l (P-Southern/Central Tai *l = P-Northern Tai *l) vs. *l̥ (P-S./C. Tai *l = P-N. Tai *r), although the latter is reconstructed in F-K. Li 1977:125 as *dl, described as 'highly tentative, and the arguments are chiefly negative'. In any event, the mainland evidence as a whole strongly supports the reconstruction of the two /l/'s at the Proto-Austro-Tai level.

The Japanese reflexes for the two /l/'s and /r/ follow anticipated lines, with only one surprise: *l̥ and *r merged and yielded initial/medial/final y-r-[0] (Japanese lacks initial *r- apart from loans) while *l also yielded medial/final -r-[0] but as an initial it was simply dropped (> [0]). The following table presents the Austronesian reflexes, updated from Tsuchida 1976:307 on the basis of recent Formosan sources (see 3.1), along with the corresponding Japanese reflexes:

Table 9. Austronesian/Japanese liquid reflexes

PAN	*PHN*	*P-Atayalic*	*P-Tsouic*	*P-Paiwanic*	*P-Rukai*	*Saisiyat*	*Japanese*
*l	l-n-n	l	[l-]	l	l	l	[0]-r-[0]
*l̥	l	r	l	l̥	l̥	L	y-r-[0]
*r	r	-	r	r	r	-	y-r-[0]

NOTES

1. The P-Puyama reflexes are the same as those of P-Paiwanic.
2. Saisiyat: Tungho /L/ is described as alveolopalatal; Saisiyat: Taai has [0] here.
3. P-Austronesian *r is poorly represented in Formosan and the Proto-Atayalic and Saisiyat reflexes have not yet been established.
4. The Proto-Hesperonesian reflexes are as conventionally cited but Dahl (1976:131) has recently pointed out that in several roots P-Austronesian *l- has yielded n- (rather than the anticipated l-) in Chamorro and some Sulawesi (Celebes) and Philippine languages. It appears, therefore, that *l (> l- ~ n-) vs. *l̥ (> l-) must be set up at the earliest Proto-Hesperonesian/Proto-Malayo-Polynesian level.

7.71 Reflexes for *l:

P-Austro-Tai initial *l- > [0]

GOURD/: P-Austro-Japanese *luRi > uri
MORTAR/: P-Austro-Japanese *lutsuŋ > usu
MOVE (FEET)/: P-Austro-Japanese *la(ŋ)kaq > agak-i
SPIRIT/: P-Austro-Japanese *liCu > itu
WEAK/: P-Austro-Japanese *lu(n)tsu > usu-
WIDE OPEN/: P-Austro-Kadai *labak > abak-i

P-Austro-Tai medial *-l- > /r/ ~ [0] (following *u)

ANT/: P-Austro-Japanese *[q,ʔ]alɔy > ari
BOARD/: P-Austro-Japanese *bali[γ,R] > Fari
CHILD[I]: P-Austro-Kadai *walak > wara-
LIGHT/: P-Austro-Kadai *[ts,tš]ilaR > sira-
YELLOW: P-Austro-Kadai *kulijaŋ > ki (< *kï < *kui)

Following canonical reduction-left, however, root-medial *-l- yielded Japanese y- via *r-: P-Austro-Japanese *talak > Jp. yak-i 'cook/roast'.

P-Austro-Tai final *-l > [0]

FLOWER: P-Austro-Tai *baŋal > Fana
SEA: P-Austro-Japanese *wacal > wata
STEAM/: P-Austro-Japanese *l̥ihul > yu (< *yiu)

7.72 Reflexes for *l̥:

P-Austro-Tai initial *l̥- > /y/

FEATHER/: P-Austro-Japanese *l̥awi > ya

HAND/: P-Austro-Kadai *l̥ima > i- (< *yi-)
SPITTLE/: P-Austro-Japanese *l̥udaq > yoda-ri
STEAM/: P-Austro-Japanese *l̥ihul > yu (< *yiu)

P-Austro-Tai medial *-l̥- > /r/ ~ [0] (following *u)

FALL/: P-Austro-Kadai *hol̥oγ > or- ~ oro-
FAULT/: P-Austro-Japanese *(ŋ)tšal̥aq > ara
FOREST/: P-Austro-Kadai *[q,ʔ]al̥ats > ara-
HUNGRY: P-Austro-Japanese *(m)bul̥ay > ue (< *uai)
GOD/: P-Austro-Kadai *(m)pil̥i > -ri
OPEN/: P-Austro-Japanese *pil̥ak > Firak-i
ROUND: P-Austro-Kadai *(m)bal̥uR > maru
SHINE/: P-Austro-Tai *(ŋ)kil̥aŋ(kil̥aŋ) > kira-(kira) ~ *(ŋ)gil̥aŋ (gil̥aŋ)
SNAKE: P-Austro-Japanese *[q,ʔ]ol̥əj > worö̈t-i
SPREAD/: P-Austro-Kadai *(m)bil̥aj > Fira
TURN/: P-Austro-Japanese *(m-)wil̥iq > mï (< *mu[l̥]i < *mwi[l̥]i[q])

P-Austro-Tai final *-l̥ > [0] ~ /r/ (before -i)

FILL/: P-Austro-Japanese *(m)pəl̥(m)pəl̥ > mor-i
SNAIL/: P-Austro-Kadai *munal̥ > mina (> nina)
STEEP/: P-Austro-Japanese *sipal̥ > soba

7.73 Reflexes for *r:

P-Austro-Tai initial *r- > /y/

BREAK/: P-Austro-Japanese *rapuq > yabuk-i
BUSH/: P-Austro-Japanese *rabuŋ > yabu
HAIR/: P-Austro-Tai *ra(m)boc (< infixed *-r-)
~ *ro(m)boc > -yo

WILDERNESS/: P-Austro-Japanese *ri(m)ba
~ *ra(m)ba > yama

P-Austro-Tai medial *-r- > /r/

BIRD[II]: P-Austro-Japanese *tari > tori
BORE/: P-Austro-Japanese *girik > kiri
ROW (BE IN): P-Austro-Tai *(n)[t,C]arap > narab-i

P-Austro-Tai final *-r > [0]

BORDER/: P-Austro-Japanese *(m)bir(m)bir > mimi

In three roots there is final *-l ~ *-n ambiguity (see 7.42) and in three others *r ~ *R ambiguity (see 7.8 for *R).

P-Austro-Tai *[r,R] > /r/ ~ [0] (as final)

EMPTY/: P-Austro-Kadai *ga[r,R]ap > kara(p)-
EXCHANGE/: P-Austro-Japanese *[q,ʔ]u[r,R]up > ur-i
OPPOSITE SIDE/: P-Austro-Japanese *si(m)pa[r,R] > sima

NOTE: In another root a provisional * (> Jp. /r/) has been reconstructed; see BELLY - Note.

7.80 Velar/postvelar/glottal fricative reflexes:

The voiced velar fricative: *γ is a prominent feature of Proto-Austronesian, occurring in many roots and in all positions, but with a bewildering variety of reflex correspondences in Hesperonesian. Dyen (1953) made use of these reflex sets to reconstruct four different proto-phonemes: *γ_1 - *γ_4, with Javanese and Malagasy 'zero' for *γ_1 corresponding to Ngadyu Dayak /h/, and with all three languages having /r/ for *γ_4. Dahl has studied this problem in great detail (Dahl 1976:86–

96), with the conclusion that the data do not justify reconstructing more than the single P-Austronesian *γ. Dyen himself had expressed great caution in this matter, one of the problems being that the Formosan reflexes in general can be fitted into a single set, albeit with some complex conditioning factors for Atayalic (see P. J-K. Li 1981:274 - Diagram). The exceptions here are Rukai, which has both *ʔ and *r as reflexes for *γ in the apparent absence of any conditioning factor(s) (see P. J-K. Li 1977:35) and Paiwan, which occasionally has /r/ rather than the regular [0] reflex, as in LIGHT/ (see Note 1 on this entry; cf. Blust 1980a:58).

In medial position, where a contrast is possible, Japanese has both /y/ and /r/ corresponding to P-Austronesian *γ, apparently reflecting an original (Proto-Austro-Tai/Proto-Austro-Japanese) *γ vs. *R distinction. In the single available cognate set (HOUSE), Japanese /y/ corresponds to Proto-Rukai *ʔ, but this comparison is of no value inasmuch as no contrast is possible in this position. The mainland evidence on this point is skimpy and relates primarily to finals (Benedict 1975:163), with P-Miao-Yao *-i < *-γ as opposed to *-ŋ < *-R.

The voiceless velar fricative: *x has not been reconstructed for Proto-Austronesian and there appears to be no evidence for such (the Dyen/Tsuchida formulaic $*x_1$ and $*x_2$ stand for sibilants - see 7.6). This is a glaring absence in a rich consonantal system and one could hardly be surprised if the slot were to be filled at some earlier Austro-Tai level. Japanese has /s/ corresponding to P-Austronesian *q in four cognate sets, one involving a widespread root of 'core' type (LEG/), and P-Austro-Tai *x has been set up as a provisional reconstruction here (7.82); also provisionally in TEN (see Glossary), in a segment of the root not represented in Japanese.

Proto-Austronesian *h is represented in Atayalic and Paiwanic, maintained best in final position but also weakly as a medial and even more weakly as an initial. Tsuchida (1976:133–8) recognizes two sets of correspondences: $*H_1$ and $*H_2$, mainly in final position. It is possible that these reflect an original distinction between voiced and voiceless *h, or even between *h and *X, but comparative evidence is lacking here (Japanese shows simple loss).

7.81 Reflexes for *γ *vs.* *R:

P-Austro-Tai *γ > /y/ ~ (final) *-i

FALL: P-Austro-Kadai *holoγ > or-i ~ örö-s-i (< *oroi)
FAST (BLOW): P-Austro-Japanese *(m)baγat > Faya-
FLUID/: P-Austro-Japanese *dźuγuq > tuyu- ~ ti (< *tï < *tui)
HOUSE: P-Austro-Kadai *[d,dz]aγan > ya
ROOM/: P-Austro-Japanese *baγa > Feya

P-Austro-Tai *R > /r/

CUT (MEAT)/: P-Austro-Kadai kəRəc > körö-s-i
FLAT: P-Austro-Japanese *(n)daRa[t,c] > nara-s-i
GOURD/: P-Austro-Japanese *luRi > uri
OFFAL: P-Austro-Japanese *[ts,tš]aRap > ara
RIBS: P-Austro-Japanese *baRaŋ > abara (< *a-bara)
SPREAD/: P-Austro-Kadai *sa(m)paR > Far-i
SQUIRT/: P-Austro-Japanese *(m)piR(m)piR > Fir-i
WASH/: P-Austro-Kadai *ʔaRap > araF-i

The two phonemes cannot be disambiguated in initial position, where Japanese has only /y-/ (NIGHT/) nor in final position after *i in view of *-ii > /-i/ (BOARD/, YEAR), except in the presence of canonical reduction-left (DEEP/); simple loss (> [0]) in final position points to *-R after the vowels *a (LIGHT/) and *u (ROUND).

7.82 Reflex for *x:

P-Austro-Tai *x > /s/

LEG/: P-Austro-Japanese *qaxəy > asi
SAND: P-Austro-Japanese *xunay > suna
STAR: P-Austro-Japanese *buxis > Fosi
YEAR: P-Austro-Japanese *[t,C]uxi[γ,R] > tosi

7.83 Reflex for *h:

P-Austro-Tai *h > [0] ~ (-)

BACK: P-Austro-Japanese *huzi > usi-rö
BEAT/: P-Austro-Tai *tutuh-i > tutui (> tuti)
FALL: P-Austro-Kadai *holoγ > or-i ~ örö-s-i
FEMALE: P-Austro-Tai *(m)bəhi > -mi
*(m)bəhi-a > me (< *mi-a)
FIELD (DRY)/: P-Austro-Japanese *qumahqumah > umo (< *umau)
STEAM/: P-Austro-Japanese *ɟihul > yu (< *yiu)

NOTE: The Japanese reflex for BEAT/ affords evidence for maintenance of the final *-h of the root until a fairly late (pre-Old Japanese) period of the language, as shown by the fact that the suffixed *-i was preceded by a juncture feature: (-): *tutuh-i > tutu-i, rather than *tutuh-i > *tutui > *tutï, i.e. the final *-h yielded (-) (but see 12 for an alternative possibility).

7.90 Glide reflexes:

The Proto-Austronesian *w and *y glides fit readily into the Proto-Austronesian canonical morpheme shape (5.0): CVCV(C), although they may not be phonemically distinct from *u and *i. Dahl, who devotes a whole chapter to the subject (1976:14–8), reconstructs simply *u and *i, respectively, with [0] in roots such as BLOW/: P-Austronesian *(n)siyup, where he considers the hiatus (*-iu-) as original. Austronesianists generally, however, employ *w and *y, often within parentheses or brackets: *-i(y)u-~ *-i[y]u-, but *-iyu is to be preferred as following the canonical shape. It is likely that the above is also applicable at the Proto-Austro-Tai level, hence Proto-Austro-Tai root citations are handled in the same fashion.

Proto-Austronesian has a conspicuous dearth of morphemes with initial *y-. Dempwolff 1938 includes two such roots for Proto-

Hesperonesian, but one of these: *yawak 'large lizard/varanus' is a canonical reduction-left derivative of *bi(ń)yawak, as clearly shown by the Tai cognate (Benedict 1975:332–3), while the other: *yuyu 'name of a large crab', reconstructible at the Proto-Malayo-Polynesian level, probably represents a derived form: *[SYL]yu > *yuyu, following a well-established pattern in the Austronesian family (5.0). It is not known whether a restriction of this kind also obtained at the earlier Proto-Austro-Tai level.

In contrast with the above, a number of Austronesian roots appear to reflect initial *w-, but there is marked variation in reflexes between w- ~ v- and [0], especially in the Formosan languages. Tsuchida (1976:143ff.), enlarging upon earlier findings by Dyen, has reconstructed four different P-Austronesian *w's, designated *w_1, *w_2, *W_1, and *W_2 (a fifth, *w_3, without known extra-Formosan representation, is indeterminate). Dahl, who has examined the subject at some length (1976: Chap. 13), rejects this approach but fails to offer any convincing alternative. It now seems evident that many, perhaps most, of the initial variation reflects the absence vs. the presence of the topic marker *ʔu- (see 9.22), the latter creating many 'fossilized' forms incorporating the prefixed element. It is still not clear, however, whether all the Formosan variation, in particular, will in time yield to explanation in terms of the *ʔu- marker and other conditioning factors.

7.91 Reflex for *w:

P-Austro-Tai *w > Jp. /w/

BOIL/: P-Austro-Kadai *luwag > wak-i
FISH/: P-Austro-Japanese *[q,ʔ]iwak > iwo (with destress)
PLANT: P-Austro-Kadai *[ts,tš]uwan > suwa- ~ suwe
> uwa- ~ uwe
TUSK/: P-Austro-Japanese *walis > Rk. wā
> *wilis > wi (> i)

After initial or prefixed *m, however, *w was either simply dropped (*w > [0]) before the low vowel *a (FRUIT/) or vocalized (*m-wi > *mui) before the high vowel *i (TURN/).

Proto-Austro-Tai final *-w was vocalized to -o in Japanese at an early period; see 6.6 for the relevant reflexes.

8.0 Suprasegmentals

Features of stress (loudness), tone (pitch: relative height and/or direction), and length (duration) are subsumed here under the cover term: accent (cf. the analysis in Benedict 1948). The Japanese-Ryukyuan pitch-accent system has been reconstructed in some detail by Martin (1979) and there appears to be no reason to doubt its existence at an early stage in this family.[7] The same linguist (Martin 1966) has compared this system with that found in Korean, but Ramsey, who has contributed a special study of the Korean system (1978), is presently (1984:p.c.) of the opinion that it is of secondary origin. Three general lines of explanation are available with respect to the origin(s) of the Japanese-Ryukyuan pitch-accent system:

A. It is of substratal origin, a feature of the language of the earlier population in Japan (see 12), contributing a suprasegmental pattern into which the Proto-Japanese-Ryukyuan forms were fitted. If this idea were to be accepted, however, one would still have to face the question: on what basis were the pitch accents assigned?

B. It was an innovation in Japanese-Ryukyuan. If this were so, one would hope to find some underlying basis for it, much as in the Chamic group of Austronesian the five-tone system of Huihui (Hainan) can be shown to reflect Proto-Chamic segmental features (5.1).

C. It reflects a suprasegmental system, of whatever nature, at some earlier (Proto-Austro-Japanese, Proto-Austro-Kadai, Proto-Austro-Tai) level.

The matter is not quite that simple, however, inasmuch as some *combination* of any two, or even all three of the above may have been involved. To make the worst (most complicated) case, a substratal system could have been modified in some general way by a superimposed system, e.g., shifting from a pure stress to a pitch-accent system but developing a special class of accents in forms with final stops (or other segmental features). In practice, one is not in a position to do much of anything

about (A) and therefore concentrates on (B) and (C), always in the hope that something better than the worst case did, in fact, obtain here.

8.1 Japanese pitch-accents

In view of the provisional nature of the Proto-Austronesian suprasegmentals (8.4), the obvious first step is to examine the body of cognate sets for possible relationship(s) between the Japanese pitch-accents and segmental features, with attention also to canonical reduction variation (8.2). Martin (1979) based his pitch-accent reconstructions on the reflexes of the 11th century and modern Kyoto, Tokyo, and Kagoshima (Kyushu) dialects as well as the reflexes of three Ryukyuan dialects: Shuri, Shodon, and Yonaguni. These reflexes all vary widely and there has been much discussion in the literature about the changes that have taken place in the system, e.g., in a recent paper (1979) Ramsay reaches the conclusion that the Kyoto dialect has played an innovative role rather than the conservative role that has generally been assigned to it. The important point in the present connection, however, is simply the fact that an accentual system of this kind has been reconstructed at the Proto-Japanese-Ryukyuan level.

Martin sets up four proto-accents in monosyllabic words: 1, 2, 3a, and 3b (prefixed with 1 = monosyllabic) and six in disyllabic words: 1, 2a and 2b, 3, 4, 5 (prefixed with 2. = disyllabic). He also reconstructs accents for longer words, which have been excluded in this presentation as of secondary origin. With the further exclusion of words found only in compounds (probable effect upon tone), 145 words for which Martin was able to reconstruct accents have been found to occur in the cognate sets available in this study (those preceded by '?' are described by Martin as 'open to considerable question').

8.2 Japanese pitch-accents and canonical reduction

The monosyllabic words of Japanese have been derived from earlier disyllabic or (rarely) trisyllabic forms, involving canonical reduction of

one kind or another, often after secondary lengthening of the root (see summary under 5.29). An examination of the 37 monosyllabic forms in the sample reveals the following arrangement with reference to canonical reduction:

Accent 1	*Accent 2*	*Accent 3a*	*Accent 3b*
Disyllabic roots with canonical reduction-right:			
HILL/ o	?BEAT/ Fa	EARTH/ ta	
?WHO ta	FEATHER/ ya	GREEN/ na	
	LEAF Fa	HIND-PART/ o	
	GOD/ Fi	SPIT/ tu	
	?TOOTH/ ki		
	TUSK/ i		
Disyllabic root with canonical reduction-left:			
			NEST su
Lengthened (final) disyllabic roots:			
DOOR to	?TOP Fo		BORE/ Fi
HAIR[1] ke			FIRE Fi
ROOT ne			GRIP/ te
WINNOW/ mi			HOUSE ya
			TOOTH Fa
Lengthened (medial) disyllabic roots:			
FLUID/ ti		EYE me	
		TREE ki	
Suffixed disyllabic roots:			
SHALLOW se			
SOUND ne			
Trisyllabic root:			
	YELLOW ki		

It would appear from the above that the accents on these monosyllabic forms reflect an underlying two-accent system: 1/2 vs. 3a/b. The accent 2 on YELLOW suggests that the final syllable of the trisyllabic root involved here (P-Austro-Kadai *kulijaŋ) was retained long enough for the word to fall into the accentual pattern for simple disyllabic roots. The only clearly irregular (without ?) accent is on HILL/: o[1], perhaps because of late origin as a doublet of oka[1].

Several forms are not included in the above presentation because of some uncertainty as to the details of their derivation: ?so[1] and ?o[3b] under

HAIR/; na[2] under NAME; se[2] under BACK; also e[3b] under BAIT, apparently of late origin as a doublet of esa[3]. Three additional monosyllabic forms, with varying accents, are the product of syncopation, with or without suffixation: mi[1] under FRUIT/; yu[3a] under STEAM/; me[3b] under FEMALE/.

The over 100 disyllabic words involved in this analysis are rarely the product of canonical reduction. It is of some interest, however, that two forms of this kind, both with canonical reduction-left and identical consonantal structures, have differing accents:

BAMBOO: *batakan > *takai > take[1]
STAR/: *bi(n)tuqun > *tukui > tuki[3]

It would appear to be difficult, indeed, to explain the distinction here other than in terms of an underlying accentual system.

8.3 Japanese pitch accents and segmentals

The accents on monosyllabic forms, as indicated above, appear to reflect an underlying two-accent system, conditioned only by canonical reduction and associated factors (lengthening, suffixation). This two-accent system shows no discernible relationship to segmental features, either in Japanese itself or in the reconstructed proto-forms, for which Martin reconstructs six different accents. It seems likely that this number will in time be reduced through simplification, as in the case of accents 3a and 3b for monosyllabic words (above), with the likely emergence of an underlying accentual pattern of the type: AA/AB/BA/BB, but such can hardly be demonstrated at the present time.

8.4 Japanese pitch-accents - the Austronesian evidence

With (B) apparently excluded as a likely line of explanation for the origin(s) of Japanese pitch accents (8.0), the next step is to search for a link with suprasegmentals elsewhere in Austro-Tai. The obvious first

place to look is in the most closely related family, viz. Austronesian, with which Japanese shares a large number of disyllabic cognate sets of the kind suitable for accent investigation. Even a quasi-relationship between the Japanese system and any accentual system anywhere in the Austronesian domain would furnish a basis for positing a similar system, of whatever type, at the Proto-Austro-Japanese level. That would still leave a huge gap at the 'continental divide', but it is not unreasonable to hope that a bridge will in time be found there also (8.6).

There is one serious problem in searching for a link in the Austronesian family: the specialists in that field have not yet come up with a reconstructed accentual system for the parent language (Proto-Austronesian). It has generally been believed, by Brandstetter, Dempwolff, and the comparativists who have followed them, that Proto-Austronesian accent involved stress rather than tone or length and that it was regularly on the penult, shifting to the ultima in roots with the p$_e$pet vowel (*ə) in the penult. Various kinds of derivative systems have been described in one Austronesian language or another, including even the five-tone system of Huihui in the Chamic group (5.1), but in most cases these systems do not require or even suggest the setting up of any accentual distinctions at the Proto-Austronesian level.

There are at least three exceptions here, one involving stress in Tsouic, the other two involving length (primarily), one in Hesperonesian and the other in Paiwanic. It has long been known that an accent of some kind is phonemic in many Philippine languages and in recent years Zorc (1972, 1978) has presented detailed information on this matter, including in the later work a most useful Appendix of Proto-Philippine forms 'reconstructed with penult length or shortness'. This linguist has shown that the primary contrast involves length in the penult; where the vowel here is *ə, length does not occur and no contrast is possible. Zorc also has pointed out the parallel furnished by Tagalog tápus 'to finish', tapús 'finished'; Toba-Batak (Sumatra) tánom 'to bury', tanóm 'buried', cited by the writer (ap. Zorc) in Benedict 1975:200–1 along with a suggestion that a lost final morpheme */- might be posited there. In his 1978 paper Zorc presents additional data along these lines, setting up a 'zero stative

suffix', clearly indicating that a distinction of this kind existed at the Proto-Hesperonesian level, if not earlier. Zorc has also suggested that some of the otherwise unexplained instances of consonant gemination in Hesperonesian may reflect a short vowel in the penult. His conclusion (1978:99) is as follows:

> It is probable that the phenomenon of vowel length and shortness is a particular Philippine innovation which developed from PHN [Proto-Hesperonesian] contrastive stress: if the stress fell on a penult vowel before a single consonant, that vowel was lengthened; if stress fell on the ultima, the penult vowel was phonetically short.

Zorc ends his paper, however, with a supportive p.c. from Dahl, who suggests that an original length rather than stress system may have been involved, ending on the note, 'What is important is that Proto-Austronesian has suprasegmental constrastive features.' Blust (1980a), on the other hand, dismisses Zorc's proposal as one of those that 'suffer from... basic conflicts with the evidence', yet he does not spell out his objections. Regardless of whether Zorc is correct in his over-all evaluation of the matter in Hesperonesian, reaffirmed in Zorc 1983, the Philippine evidence does seem to require the reconstruction of a length distinction at the Proto-Philippine level, as that linguist has done.

As pointed out by Tsuchida (1976), the Tsouic evidence requires the setting up of a contrastive accent of some kind for the parent language. The evidence comes primarily from Kanakanabu, which has contrastive stress, and Tsou, which has complex morphophonemic alternations requiring the setting up of a morphophonemic stress. Of special interest here, in view of the length found in other Austronesian systems, is the fact that Tsou also reflects ultimate accent by doubling the vowel, e.g., P-Tsouic *macá 'eye' > Tsou mcoo (*a > /o/ is regular shift). The Tsouic accent has a very low functional load, e.g., Tsuchida found only two minimal pairs for stress in Kanakanabu, yet his reconstructed Proto-Tsouic roots show this feature (unless represented only in Saaroa), at times ambiguously because of conflicting Tsou/Kanakanabu evidence.

The third and final Austronesian accentual system to be considered here is that of Kabalan (= Kbalan, Kavalan, Kuvalan), a somewhat deviant Paiwanic language still surviving as a remnant in northeast Taiwan (2.0). The relevant material on this language has recently been presented by Moriguchi (1982) in a meticulously detailed study. He found that Kabalan has non-contrastive ultimate stress along with contrastive penultimate length, with pitch optionally associated with the length. In a later (1983) study of the language, he describes four vowel phonemes: /a i u ə/, with length occurring only with the first three of these, and in lists of Kabalan words with penultimate long vs. short vowels, none of the entries have /ə/ in the penult. The situation in Kabalan, therefore, is precisely the same as that set up for Proto-Philippine by Zorc.

We come now to the nub of the matter: do the above accentual systems correlate with one another in any manner whatever? Any investigation of this matter is considerably limited by the fact that Proto-Philippine numerals, deictics, and kinship terms belong to 'form classes' (see Benedict 1975:200), rendering them of no comparative value. In addition, the Kabalan evidence is suspect in view of the discrepancies in vowel length found in the Kuvalan (= Kabalan) forms cited by Ferrell (1969) as well as by the fact that length does not appear at all as a feature in the forms cited in a recent sketch of Kabalan (P. J-K. Li 1978b). A fairly sizeable number of relevant cognate sets have been uncovered, however, especially for Proto-Philippine and Proto-Tsouic, permitting of at least tentative conclusions, as follows:

1. The three accentual systems do not appear to be correlated in any obvious manner. Proto-Philippine and Proto-Tsouic agree on penultimate or ultimate accent (length/stress) in many roots but also disagree in almost as many, with Proto-Philippine accent on the penult = Proto-Tsouic accent on the ultima significantly more common than the reverse. Kabalan further complicates matters by at times showing a discrepancy even where Proto-Philippine and Proto-Tsouic are in agreement, e.g., P-Philippine *m[a breve]ta (= matá) 'eye', P-Tsouic macá but Kabalan ma:ta (= *máta).

2. It is possible that the skew noted above is of some significance,

perhaps reflecting a similar skew in an underlying accentual pattern of AA/AB/BA/BB type, with reflexes as follows:

AA: P-Philippine penultimate = P-Tsouic penultimate accent.

AB: P-Philippine penultimate = P-Tsouic ultimate accent.

BA: P-Philippine ultimate = P-Tsouic penultimate accent (uncommon).

BB: P-Philippine ultimate = P-Tsouic ultimate accent.

The alternative, of course, is to view all three Austronesian accentual systems as innovative, with random correspondences. Only a comparison with some extra-Austronesian language group, such as Japanese-Ryukyuan or a mainland family, can be expected to provide an answer on this point.

8.5 Japanese pitch-accents and Austronesian accents

The hope that Japanese might throw light on the Austronesian accentual systems and thus, in turn, provide some answers to its own problems falters in the face of a dearth of relevant cognate sets. In the group of monosyllabic words, with accents 1 and 2 contrasting with 3a and 3b (8.2), the only comparisons in the former pair are for accent 1 forms: to[1] 'door', Tagalog p[i breve]ntó?; ?ke[1] 'hair', P-Tsouic *vək[schwa acute]sə; ti[1] 'blood' (< 'fluid'), P-Philippine *d[u breve]ɣu?, all corresponding to ultimate accent forms in Austronesian. The four comparisons for accent 3a and 3b words, however, include correspondences to both penultimate and ultimate accent forms in Austronesian: ki[3a] 'tree', P-Philippine *ka:yuh, P-Tsouic *káiwu; Fa[3b] 'tooth', P-Philippine *ŋi:pən; contrasting with me[3a] 'eye', P-Philippine *măta, P-Tsouic macá (but Kabalan ma:ta - see 8.4); Fi[3b] 'fire', P-Philippine *$h_a$puy ~ *$ʔ_a$puy, P-Tsouic *ʔapúžu. It is possible that canonical reduction and related factors have played a conditioning role here, but without considerable additional material for comparison, one is unable to take the analysis any further.

The same situation prevails with disyllabic words. Only about a dozen cognate sets with well-attested accents in Austronesian are

available and these are unable to provide more than tantalizing clues, e.g., accent 5 ties in with accent 1 on monosyllabic words in the allofamic pair under FLUID/: ti[1] 'blood' (above) ~ tuyu[5] 'dew', P-Philippine *d[u breve]yu?, while accent 5 also appears in two other words with correspondences to ultimate accent forms in Austronesian: Fena[5] 'earth, mud' (under LOWLANDS/), Tagalog $b_a$na?; ?ani[5] 'older brother', P-Philippine *$w_a$ji ~ *?a:ji (but see 8.4 for kinship terms as 'form classes'). With the disyllabic words, as with the monosyllabic, one cannot hope to make much progress until such time as a much wider range of comparative materials will have become available.

8.6 Japanese pitch-accents - the mainland evidence

At first glance it may seem strange to look to the mainland Austro-Tai languages for clues about Japanese pitch-accents. All these languages are tonal and monosyllabic, with three-tone systems reconstructible for Proto-Miao-Yao and apparently now also for Proto-Kadai. The writer has pointed out (1975:191) that the tones of Li (Hainan) show an over-all correspondence to those of Kam-Tai and the recently described Tong-shen dialect shows a splitting into 'high' (H: < voiceless initials) and 'low' (L: < voiced initials) series, precisely as in Kam-Tai (Solnit 1983). At a still earlier time-depth, spanning the main gap in the Kadai family, the six-tone system of Gelao: Gao has been found to bear a striking resemblance to the Kam-Tai and Li (Tong-shen) systems, with the same splitting. As anticipated in view of the span of time involved in this major cleavage in the Kadai family, the tonal correspondences are far less regular than those displayed by Li and the underlying pattern can be made out only with great difficulty: mid < *A-H, mid-high < *A-L, high < *B-H, low-rising < *B-L, mid-rising < *C-H, low-falling < *C-L. Tonal information is still lacking on Lati, the other language on the further side of the gap.

The ultimate source of the Kadai and Miao-Yao tonal systems seems evident enough. Chinese has a system of precisely this kind, with identical splitting into 'high' and 'low' series. What is more, the *A and *B tones of

the system correspond to a pair of proto-tones on the Tibeto-Burman side of Sino-Tibetan (PST *A and *B tones) while the third tone of Chinese, *C can be shown to have developed as a sandhi tone in close-juncture before suffixed elements and in compounding (Benedict 1972). Both Kadai and Miao-Yao borrowed a number of cultural terms from the early Chinese and these came with the tones attached, making for a splendid tonal correlation between Chinese and the unrelated Tai languages (!), as long ago spelled out by Wulff (1934). There can be no doubt about it: the Chinese tonal system was somehow imposed upon two adjacent language families of the Austro-Tai stock as well as upon one (Vietnamese) of the Mon-Khmer family. This was not 'stimulus' diffusion but 'direct' diffusion: it was not the 'idea' of a tonal system that diffused but the tonal system itself, splitting potential and all, along with kin numeratives (Benedict 1945) and other paraphernalia of early Chinese civilization. There has never been anything quite like it, anywhere, and it utterly transformed the linguistic picture of Southeast Asia.

As this linguistic history gradually came to light, the writer at first felt confident that rules for tone assignment in Kadai and Miao-Yao would be establishable. He was later (1975:190–200) surprised to discover that factors of this kind are hard to come by and, in fact, may not even exist, apart from a generalization or two, e.g., the marked tendency for reduplicated roots to yield tone *A in Kam-Tai. This failure to find any basis for tone assignment either in Kadai or Miao-Yao, along with the emerging data on Proto-Philippine accents (Zorc 1972), led the writer to make the following suggestion (1975:199–200):

> This note would be incomplete without at least mention of the possibility of reconstructing an accentual system, tonal or other, for the parent A[ustro-]T[ai] proto-language. One might, for example, set up a LOW vs. HIGH distinction in forms of more than one syllable (phonemic on only two of the syllables), with LOW + LOW and HIGH + HIGH yielding tone *A in Tai/K[am-]S[ui], LOW + HIGH yielding tone *B, and HIGH + LOW yielding tone *C. Although the numerical preponderance of tone *A (A : B : C ratio = 2 : 1 : 1) in KD [Kadai] and M[iao-]Y[ao] appears to reflect the situation in the Chinese prototype, as noted above, the development suggested

> above might well have yielded the same 2 : 1 : 1 ratio (assuming a random distribution of LOWs and HIGHs in proto-AT). One would anticipate that an accentual system of this type would tie in with any pattern of phonemic stress that might eventually be reconstructed for AN [Austronesian].

The writer did not at that time even suspect that Japanese and its pitch-accents would ever enter the picture. With the evidence now at hand of at least three different accentual systems in Austronesian, and in spite of an apparent lack of any correlation among them, the writer has come to look more favorably upon his early suggestion for explaining tone assignments in the mainland Austro-Tai languages.

The Japanese pitch-accent system may have another mainland connection, of a most unusual and intriguing nature. W. L. Ballard, an authority on the complex tone sandhi found in the Wu dialects of the lower Yangtze basin in China, has ingeniously suggested (1983) that this feature, unexplainable on a 'native' (Chinese/Sino-Tibetan) basis, may have had its origin in a substratum population speaking a language with pitch-accents. It so happens that a system of this kind can be reconstructed for Proto-Japanese-Ryukyuan, as described above, and it also so happens that the Proto-Japanese almost certainly contributed to the early population of the lower Yangtze basin, possibly making up the bulk of it. If a relationship of this kind proves to be verifiable it will constitute yet another early link between Japanese and the neighboring mainland languages.

8.7 Japanese pitch-accents - discussion

The principal finding that has emerged from this investigation of the Japanese pitch-accent system is that the monosyllabic words, when arranged by canonical reduction derivation, reflect a two-way distinction: accents 1 and 2 vs. 3a and 3b. If this simplification is extended to the disyllabic words, with six accents, one arrives at a four-way distinction, thus suggesting an underlying pattern of AA/AB/BA/BB type. The writer has suggested that an accentual system of this kind, if

reconstructible for the parent Austro-Tai language, might serve to explain tone assignments in both the Kadai and Miao-Yao families.

In practice, one must be able to demonstrate correspondences of some kind between the Japanese system and one or another (or two or three) of the Austronesian stress/length systems and, to date, the relevant cognate sets that have been assembled cannot provide more than a clue here and there. This is hardly surprising, however, in view of the difficult problems in reconstruction provided by suprasegmental systems at great time-depths, e.g., by the Kadai tones (8.6).

Actually, we are left with at least six Austro-Tai accentual systems that have not yet been explained in terms either of other systems or of proto-segmental features: the Japanese pitch-accent, the Tsouic stress, the Proto-Philippine and Kabalan length, and the Kadai and Miao-Yao tones. It is possible that a system of AA/AB/BA/BB type underlies all these accentual 'happenings'; at least, the possibility of such cannot be excluded on the basis of data presently available. It should be evident that one can hardly make use of our present lack of an explanation in any of these areas to argue against genetic affinity unless he is prepared, for example, to remove Tsouic from the Austronesian family.

9.0 Morphological features

The main features of Proto-Austro-Tai morphosyntax must be reconstructed largely on the basis of the Austronesian evidence. The mainland languages have perforce lost all but traces of affixed elements in the process of monosyllabization, along with reflexes (vowel clusters) attesting to earlier reduplicated forms (Benedict 1975:146–9). The mainland verb - object word order agrees with that of Chinese, which deeply influenced these languages, but it is also characteristic of the Austronesian languages, which typically have verb-initial order, as in Atayal (Egerod 1966), Rukai (P. J-K. Li 1973), and other Paiwanic languages (P. J-K. Li 1978b), along with suffixed pronominal enclitics. As emphasized by Miller and other linguists favoring an Altaic origin for the language, Japanese has object - verb word order along with prefixed enclitics. These features are to be assigned to the substratum, of Altaic or other origin, that clearly exists in the language. The incoming Proto-Japanese-Ryukyuan-speaking people did, however, manage to implant one of their enclitics, that for the 3rd person pronoun -na (see THAT/) in its 'rightful' (Austronesian) position as a suffix, already fossilized in Old Japanese and retained in the modern language only in a few compounds: Jp. tanagokoro 'hand-its-heart/center' = 'palm', Jp. manako 'eye-its-child' = 'pupil' = 'eye'. It is evident, however, that the main value of any evidence on morphosyntax from Japanese lies, as in this example, in the support that it might furnish for reconstructing a given feature at the Proto-Austro-Japanese level. In the following presentation, therefore, attention will be focussed on the relatively few items that can securely be reconstructed for Proto-Austronesian and/or earlier levels.

9.1 Reduplication

Reduplicated verbal forms are especially characteristic of the Austro-Tai stock, associated at times with 'repetitive action', as in the roots cited in Benedict 1975:147: LAUGH, SEW/PLAIT/WEAVE, BEAT/WING. A number of these roots are represented in Japanese, usually in reduced form through canonical reduction-left; see those cited under 5.23: BEAT/, CALL (ANIMAL)/, FILL/, HOLD (IN HAND ~ MOUTH)/, POUND, SEIZE (WITH HANDS ~ TEETH)/, SQUIRT, SUCK, THRUST/, some of which clearly involve 'repetitive action'. In four roots (below) the reduplication has been retained; no cognate set in this group shows reduplication only in the Japanese representative.

CHEW/: *ma(q)maq > mama (nominalized)
HIT/: *(n)tak(n)tak > tatak-i
PECK: *tuktuk > tutuk-i
WASH/: *(n)[ts,tš]u(n)[ts,tš]uk > susug-i ~ sosug-i

In the root for FILL/ (under 5.23): *(m)pəḷ(m)pəḷ > mör-i, there is an interesting allofam: OJ morö-morö 'all, both, many, together', apparently formed with an epenthetic -ö, a most unusual development in Japanese. A characteristic development in the Austronesian family, almost certainly also at the earlier Proto-Austro-Tai level, is reduplication of SYL-2 followed by canonical reduction-left, as in SEIZE (WITH HANDS ~ TEETH)/: P-Austronesian *caŋkup > *(ŋ)kup(ŋ)kup. In roots of this kind an unreduplicated Japanese form is derivable from either the basic or the reduplicated root, with the choice determined by semantic considerations; in the above root the OJ kuF-i has been placed with the reduplicated root.

Reduplication has also played a prominent role in the formation of the Japanese numeral system, with parallels in Austronesian (10.3). It also appears in other areas of the lexicon, again with extensive parallels in Austronesian and (by reconstruction) the mainland languages; note for kinship terms: HEAD (OF LINEAGE)/, MOTHER/; for body part

words: BORDER/EAR, BREAST, FLESH, STALK/FOOT, VULVA/, all with exact Austronesian counterparts; also THIGH; for 'nature' words: SHELLFISH, LEAF, SOOT, also for BAIT, all with Austronesian counterparts but with the reduplication largely disguised in Japanese in the latter root, either through medial voicing: Jp. Faba, or through medial nasal increment: Jp. Fama, with only the double nasal increment form still reflecting the original reduplication: Jp. mama. All in all, it appears that Japanese has rarely innovated as regards reduplication, generally simply retaining the reduplication or reducing the form through canonical reduction-left, as in the verb forms cited above, or through canonical reduction-right in non-affixed forms: cf. TOOTH/: *gigi > ki.

9.20 Prefixation

Proto-Austronesian has prefixed *ma- 'forming words signifying a quality, "adjectives."..often a quality which is the result of an action' (Dahl 1976:119), along with *pa- of 'causative character' (ibid.). Kadai evidence supplied by the incorporation of these prefixes serves to establish them at the Proto-Kadai level, with indirect evidence provided by Miao-Yao to place them at the still earlier Proto-Austro-Tai level. The contrasting nature of the two prefixes is best revealed in the archetypal root: P-Austro-Tai *(ma-)play 'die' ~ *pa-play 'kill'; the distinction has lapsed badly in Austronesian representatives of this root, especially outside Formosan, e.g., Toba-Batak (Sumatra) mate 'dead', pate 'come to an end'. Jp. Fate 'end', Fate-ri 'to end, be finished, die', incorporating the *pa-prefix, shows a parallel lapsing of function and matches Toba-Batak pate in a curiously precise manner. In another Proto-Austro-Tai core root it is the *ma- prefix that has been incorporated: P-Austro-Tai *kaʔ 'eat', Malay makan < *ma-kaʔ-ən (*-ən is goal focus marker) 'id.', Jp. maka-na-i (-na-i is verbal supplement) '(feed =) provide with food, cater, board'; here it should be noted that Dempwolff 1938 cites the Malay form under P-Malayo-Polynesian *pakan < *pa-kaʔ-ən 'fodder'. The *m-variant of the *ma- prefix is represented in the Proto-Austro-Japanese root for TURN/: *m-wiɻiq > *mwi > *mui > mï (5.22).

Additional examples of the incorporation of prefixes are furnished by two key terms from the 'spiritual' realm which have incorporated *k- and *t-'kinship prefixes' (10.43). Still another example of this kind of incorporation is supplied by the wa- ~ a- doublet for the first person pronoun, where the Ryukyu evidence suggests that prefixed *w- retained a function well into the Proto-Ryukyuan period (10.1).

9.21 Prefixed *qa- > *ka-

This prefix is considered separately inasmuch as there is some evidence that it was 'separable', i.e., functioning until shortly before the Old Japanese period. It is widespread in Austronesian as well as on the mainland, especially with body part words, but the basic function remains uncertain (Benedict 1975:147). Even in Paiwan, which displays a wide range of productive prefixes, qa- is glossed as 'nominalizing prefix; no longer productive' (Ferrell 1982). It has attached itself to certain roots so closely that it can be reconstructed as an optional feature (*qa- > *ka-) at early levels, e.g., P-Austro-Kadai *(qa-)ba[γ,R]a 'shoulder' is usually represented by *qa- prefixed forms in Austronesian, with some 'separability', but by *ka- prefixed forms in Southeastern Papua, with the Proto-Tai cognate: *ʔbaa^{C} (F-K. Li 1977:68) < *q[a]-ba[γ,R]a; cf. also HAND/FIVE (see Glossary); also in a different lexical area SPIRIT/ (see Glossary - Note). In Dzao Min, a Yao language, this prefix (a^{1} < *qa-) appears to have 'run wild', being applied to a wide variety of nominal forms, including even loanwords from Chinese ('face', 'stool') as well as being used in a nominalizing role: lai^{2} 'to plow', a^{1}-lai^{2} 'plow'; vui^{5} 'to peel (skin)', a^{1}-vui^{5} 'fingernail' (Mao et al. 1982:69 and Glossary). The one well-attested role, throughout Austronesian, Kadai, and Miao-Yao, remains that of a prefix in body part words. The frequent shift to *ka- is to be interpreted as the result of destressing as a prefix, with /k/ as the destressed equivalent of /q/, comparable with the destressed vowel *ə (6.4); cf. the Proto-Hesperonesian doublet for 'leech': *linta? < *limantaq (syncopated form) ~ *lima(n)tək, with typical destressing of SYL-3 (6.4).

The basic *qa- prefix appears in two body part cognate sets, one

showing incorporation but the other indicating, through its doublet formation, a degree of 'separability' at a relatively late (pre-Old Japanese) stage of the language:

RIBS: P-Austro-Japanese *baRaŋ > abara, from *[q]a-bara
HAIR/: P-Austro-Tai *(n)[ts,tš]a(m)boc > sawo ~ *sa(w)o > swo > asa ~ *wo > o

In HAIR/ the *qa- can be reconstructed as an optional feature at the early level in view of its appearance also in Kadai. As noted above (5.25), the prefix (a-) does not appear in the Old Japanese line of development: sawo ~ swo and thus seems to have been 'separable', but it is also possible that these Old Japanese forms were the product of canonical reduction-left.

It is likely that the 'body part' *qa- (> a-) prefix has also been incorporated into other trisyllabic Japanese words in this category: abura 'oil/fat', atama 'head', perhaps also ase (< *asai?) 'sweat' and ato, OJ ato = atwo (< *atou) 'back', but no Austro-Tai cognates for any of these have yet turned up.

In one root it is the *absence* of prefixed *qa- (> a-) that is so significant: see SPIRIT/, with Jp. itu 'divine power' maintaining the unprefixed root in the face of widespread *qa- prefixation in Austronesian.

9.22 Prefixed *ʔu-

P-Austronesian *ʔu- can be set up as a topic marker on the basis of forms from Ivatan (Northern Philippine), Ami (Paiwanic), and Sediq (Atayalic), as assembled by Reid (1979). As suggested by Dahl (1976:49–50) for pronominal, and Zorc (1981:30) for nominal, forms, this element has become 'frozen' on certain lexical items, thus explaining at least some of the puzzling /w/ ~ [0] variation in initials (see 7.90). Typically, the reflexes for *w- do not appear in the 'central' Malayo-Polynesian languages, being found only in Paiwanic and certain

'peripheral' Malayo-Polynesian languages, notably Aloene and Niala (West Ceram), Lau (Solomon Islands) and Chamoro (Mariana Islands). The distribution here in itself points to an archaic feature which is only rarely reflected in the 'central' region, e.g., the P-Hesperonesian *ʔaka[d.] ~ *waka[d.] (< *ʔu-ʔaka[d.]) doublet under ROOT. The three 'core' roots cited by Dahl and Zorc are of special interest inasmuch as all three are represented in Japanese:

	Cent.MP	*Per.MP*	*P-Pai.*	*Jp./Rk.*	*PKD*	*PMY*
DOG	*ʔats$_2$u	*wats$_2$u	*ʔats$_2$u	winu	-	-
			*wats$_2$u	wenu		
CHILD	*ʔanak	*ʔanak	*ʔalak	wara-	*walak	-
			*walak			
I	*ʔaku	*waku		a-(nu)		*waŋkon
	*yakən		*yakən	wa-(nu)	*yaku	*ʔyakou

The Proto-Paiwanic doublet *w- form in DOG is reflected in Ami, Paiwan, and Pazeh but not in Rukai, whereas in CHILD it is reflected in Ami and Rukai and one dialect (Hinan) of Puyuma but not in Paiwan nor in a second Puyuma dialect (Chipon). As pointed out by Zorc (1981:30), this irregularity is strongly indicative of an earlier *ʔu- incorporative process. Even more significantly, Ami also has prefixed *w- in w-ama 'father' and w-ina 'mother' where Bunun has t-ama ~ t-ina and Paiwan has k-ama ~ k-ina (see 10.43). The Japanese w- cognates parallel the formosan *w-forms, thus establishing *ʔu- (> w-) at the Proto-Austro-Japanese level, while the P-Kadai *w- root sets it up at the earlier Proto-Austro-Kadai level.

In the third, pronominal root charted above, the *w- (< *ʔu-) is seen to be in competition with *y-, from an *ʔi- element (see 9.23). Japanese has a w- ~ [0] doublet here, with apparent secondary semantic specialization in Ryukyuan (see entry). Proto-Kadai has only the *y-form but both *w- and *y- forms must be set up for Proto-Miao-Yao (see 9.23 for details), serving to establish both elements at the earliest (Proto-Austro-Tai) level.

In addition to the above, an incorporated *?u- appears in the Japanese cognates for DEEP/SEA and DAY, while the *?u- > w- development is found in the cognates for BAIT and SNAKE. It also seems likely that at least some trisyllabic forms with initial u- have incorporated the *?u-element; cf. the three faunal terms: usagi 'hare', uzura 'quail', and uguisu 'nightingale' (-su 'bird'); also the semantically specialized doublet: sio 'salt' ~ usio 'salt/sea water/tide', the latter tying in with umi (< *?u-mi) 'sea' (see DEEP/SEA).

The Japanese cognate series for BAIT (see entry) includes a dialectal form (yosa) reflecting the unprefixed root along with standard forms in w-(weba, wesa) derived from the *?u- prefixed root. This variation, together with the doublets for 'I' (see chart above) and 'salt/sea water' (above), suggests that *?u- remained productive in Japanese up to a fairly late period. Even better testimony to this effect is provided by three early Japanese loans from Chinese, all faunal or floral items and all provided with the *?u- prefix: Middle Chinese (7th century) [Chinese character #4310] ma 'horse' > Jp. uma, [Chinese character #4402] mu[a.]i 'plum' > OJ umë (< *u-mai), [Chinese character #2167][Chinese character #4303] γuo-ma (< g'o-ma) 'sesame' > OJ ugoma ~ Jp. goma. The doublet for 'sesame' probably reflects, rather than loss of SYL-1, parallel lines of development from prefixed and unprefixed forms of the early loan, paralleling the dialect vs. standard variation under BAIT.

9.23 Prefixed *?i-

Reid (1979) has set up P-Philippine *?i as a personal nominative marker, noting especially the Kapampangan and Ivatan (Northern Philippine) 'long pronoun' sets with initial ?i- ~ y-, including Iva. yakən 'I' (see below for *-ən). P-Austronesian *?i- can readily be reconstructed on the basis of comparison with Formosan forms: P-Pai. *?i-: Paiwan i- 'appositional particle for personal names and pronouns', also (Pazeh, Saisiyat, Thao) *yaku < *?i-aku 'I', Atayalic: Squliq i- 'prefix for persons' (regularly prefixed to kinship terms), also P-Atayalic *(y-)aku? 'I'. The Proto-Kadai and Proto-Miao-Yao *yaku ~ [2] yakou reconstructions (see

chart in 9.22) establish *ʔi- at the earliest (Proto-Austro-Tai) level, with additional support for it presented by a Tai kinship term; see SIBLING (OLDER).

Ivatan has suffixed *-ən (matched in Itawit and Yami) in 'I' as well as in yatən 'we (incl.)' and yamən 'we (excl.)', derived in a similar manner: *ʔi- + *-ən, with deletion of the final vowel of the pronominal root. Paiwan has parallel forms involving the personal nominative marker *tsi- (see 9.24): ti-akən 'I', ti-amən 'we (excl.)'. Surely the *-ən here is to be equated with the goal-focus marker *-ən (see 9.40), as applied to the verbalized root. Dempwolff (1938) cites *ʔa(ŋ)kən 'adopt; (the adopted =) mine' while Zorc (1981) cites the unsuffixed form: *a:kuʔ 'admit, acknowledge' (neither writer relates these forms to the pronoun). In any event, whatever the ultimate analysis, the (incorporated) form must be assigned to the earliest (Proto-Austro-Tai) level on the basis of the P-Miao-Yao (P-Miao) *waŋkon < *ʔu-aŋk-ən (see chart in 9.22), with nasal increment as (optionally) in Malayo-Polynesian. In contrast with Austronesian, however, the *-ən is found here in association with the topic marker *ʔu-(see 9.22) rather than the personal nominative marker *ʔi-. The Proto-Miao-Yao doublet *^{2}yakou, as reconstructed for Proto-Yao, is from the unsuffixed root, precisely matching the Formosan *yaku ~ *(y-)akuʔ as well as the Proto-Kadai *yaku; the P-Japanese-Ryukyuan *a-(nu) ~ *wa-(nu) doublet also reflects the unsuffixed root but in combination with the topic marker *ʔu- rather than the personal nominative marker *ʔi-. It is apparent, in view of this great diversity, that these were all highly productive morphological elements at the Proto-Austro-Tai stage.

The personal nominative marker *ʔi- is represented in Japanese-Ryukyuan to be sure, but by the Old Japanese '2nd person pronoun' enclitic i-. Proto-Austronesian has both *iSu = *ʔiśu 'you (sg.)' and the enclitic *-Su = *-śu (Dahl 1976:122), with the independent form to be analyzed as *ʔi-śu. In the Kadai family, Proto-Southern Tai/Proto-Northern Tai has *suu^{A} 'you (pl.)', but there is indirect evidence for an earlier (Proto-Kadai-level) *ʔisu^{A} 'id.': Mak (KS) si^{A} < *[ʔi]si^{A} through *u > /i/ assimilation; also Gelao: Gao si^{A} sa^{A} < *si^{A} su^{A} (regular shift),

combining the assimilated and the unassimilated forms. An earlier *isu may well have given rise to Jp. i- through regular canonical reduction-right (see 5.21), but the possibility of an innovation in the pronominal root here cannot be excluded. The key point in all this is that Japanese provides still further evidence for the widespread, Proto-Austro-Tai-level personal nominative marker *?i-.

9.24 Prefixed *tsi-

Reid (1979) has reconstructed Proto-Cordilleran (Northern Philippine) *si as an additional (to *?i - see 9.23) personal nominative marker, again noting its use in 'long pronoun' sets. Here also one can set up a Proto-Austronesian root (*tsi-) without any difficulty; cf. Paiwan ti- 'particle used before personal name or independent pronoun' (see the forms cited in 9.23); P-Atayalic *hiya? 'he', with *hi- (<tsi) for the *?i- of P-Malayo-Polynesian *?iya 'id.'; cf. also the *t'i- of P-Hesperonesian *t'i[d.]a 'they', with SYL-2 of uncertain shape (see Dahl 1976:122). Dahl (1976:121) gives P-Austronesian *t'i- as a topicalizing particle with proper names of persons, citing Paiwan ti-, Ami ci-, Maanyan (Borneo) hi-, and Malagasy i-, the Maanyan cognate serving to establish the P-Austronesian initial as *ts_1- (see Table 7), from P-Austro-Tai *ts-.

This personal nominative marker also has Japanese-Ryukyuan representation: OJ si- '2nd person pronoun' ~ '3rd person pronoun', an enclitic form. The lack of person specificity is highly significant since it serves to tie this Old Japanese element directly to Northern Philippine *si- and Paiwan ti-.

9.3 Infixation:

The Proto-Austro-Tai infixes included the liquids: *-l- and *-ḷ-, probably also *-r-, all well supported in some degree by evidence from the mainland languages (Benedict 1975:148–9). Of greater significance than these, however, is infixed *-m- or (in Proto-Austronesian) *-um-, which serves as an actor-focus marker in the four-focus system that probably

should be reconstructed for the verb at the Proto-Austro-Tai level, primarily on the basis of its representation in Proto-Austronesian, as outlined by Dahl (1976:148). There is some evidence for this infix in the form of an incorporated -m- in Kadai and Miao-Yao cognates (Benedict 1975:148). It is possible that Japanese also has forms that incorporate this infixed *-m-; the most likely such is Jp. mi- 'see'; cf. P-Austronesian *ki[t.]a 'id.', P-Atayalic *kita? ~ *k-um-ita?, Atayal: Squliq kita? ~ m-ita?, with typical canonical reduction-left (5.1); the root can be reconstructed at the Proto-Kadai level (Benedict 1975:373–4), lending some support to this comparison, but there appear to be no parallels in Japanese for the loss of final *-ta in a verbal form of this kind. It is not at all unlikely, however, that continued search will in time reveal Japanese forms that incorporate infixed *-m-, perhaps also others that incorporate a liquid infix: all > Jp. -r- as medial (or *-l̥- ~ *-r- > y-as initial after canonical reduction-left).

9.40 Suffixation:

In addition to the infixed actor-focus marker (9.3), the Proto-Austronesian verb system outlined by Dahl (1976:118–9) also had a goal-focus marker *-ən, two referent-focus (includes 'dative' and 'locative') markers *-an, *-i, and an instrument-focus marker *Si- = *si-.[8] The instrument-focus marker has been incorporated in one form (see Note on FISH/), but no certain trace of the goal-focus marker in Japanese has been uncovered; both referent-focus markers (or their equivalents) do appear to be represented in the language. In addition to these verbal suffixes, both *-i and *-a(n) must be recognized as 'kinship suffixes' at early levels in Austro-Tai (10.44, 10.45).

9.41 Suffixed *-an

The referent-focus marker is represented (incorporated) in two Japanese roots, both with parallels in Austro-Tai. This element often plays a nominalizing role in Austronesian, cf. BLOW/ (III): Puyuma pa-

a-tiyup-an 'bamboo flute', and it is seen in this role in DREAM: P-Austro-Tai *śi(m)p-an > imë (< *imai < *yiman), paralleling the Kadai development from the unassimilated doublet root: *śu(m)p-an.

The second example of incorporation of this referent-focus marker is verbal: TASTE/: P-Austro-Kadai *ńa?am(ńa?am) > *na?am-an > namë (< *namai < *naman), with the regular *-i verbal suffix assimilated to the secondary *-i (< *-n). Javanese and Malay show a parallel goal-focus marker *-ən in this root.

In a third root: NAME: P-Austro-Kadai *?a(ń)ja(-n) ~ *?a(ń)ja(-i) Austronesian appears to have incorporated the referent-focus marker *-an whereas Kadai has incorporated the other referent-focus marker: *-i. The Japanese cognate here (na ~ -ne) is from *nai, with *-i reflecting an earlier final *-n as well as final *-i. In the Glossary the Japanese form is grouped with Austronesian as reflecting suffixed *-an on the basis of closer affinity with that family. In a fourth root: HIT (MARK) there also is evidence for suffixed *-an vs. *-i, this time from the Kadai family.

In view of the nominalizing role of *-an (above), it is likely that this referent-focus marker also gave rise to the -a suffix that plays the same role in Japanese, e.g., OJ naF-i 'twist rope', naF-a 'rope'. It had ceased to be productive even at the Old Japanese stage and derivatives with this suffix can be disguised to some degree, as in the following cognate sets:

SPREAD/: P-Austro-Tai *sa(m)paR > Far-i 'spread'
> Far-a '(a spread =) field'
WIDE OPEN/: P-Austro-Kadai *labak > abak-i 'to open (grave)'
> Fak-a 'grave'

Cf. also the following, which provides a contrast with -i in its nominal (as well as verbal) role: Jp. nar-i 'to sound, ring', nari 'sound, ring, ringing', onara (< *o-nara) '(little sound =) fart' (cited under NOISE/, which exhibits a parallel semantic development). The disguise is somewhat better, it would appear, in Jp. mar-a 'penis', cited by Martin 1979 as '(evil) penis', with the note: 'Said to be from Sanskrit māra but confused with verb mar-/ = mar-i 'excrete'.' Surely this is simply the -a

suffix derivative: 'the excreter', closely paralleling the P-Hesperonesian *pəliγ < *p-ɨ-iγ '(the squirter =) penis' (cited under SQUIRT/).

Suffixed -a also appears in four nominalized adjectival forms:

CALM: P-Austro-Japanese *(n)tə(n)doq > nodok-a 'calm(ness)'
HARD: P-Austro-Japanese *makatś > kat-a 'mold' ~ 'hard(ness)'
SHORT: P-Austro-Kadai *(m)pe(n)dlek > mizik-a 'short(ness)'
SMALL: P-Austro-Japanese *tipi[ts,tš] > tiFis-a 'small(ness)'

In addition to the above cognate sets, all clearly of a basic verbal/adjective nature, four other sets are represented by -a suffix forms in Japanese:

BONE: P-Austro-Japanese *bani > Fone (< *Foni-a)
MOUNTAIN/: P-Austro-Japanese *ɻutuk > tuk-a
SHOULDER: P-Austro-Japanese *baɻika[t,c] > kat-a
SIDE/: P-Austro-Japanese *təpi > -pe (< *-Fi-a)
> -be (< *-bi-a)

In the last of these sets Proto-Hesperonesian has *təpit' 'go along the border' as well as *təpi 'side/border', suggesting that the root is basically verbal. It is unclear, however, whether the -a suffix in these roots represents the same proto-morpheme as the nominalizing suffix. There is some mainland evidence (Benedict 1975:149; also see Tai derivative under HORN) for a 'body part *-a(n) suffix, which might explain both the BONE and SHOULDER derivations.

The basic question remains: is the Japanese nominalizing -a suffix simply a descendent of an earlier referent-focus marker *-an? If the 'body part' prefix (above) is directly related as well, as appears likely, the Proto-Austro-Kadai proto-morpheme would have to be set up as *-a(n), thus giving no problems in yielding both -a and *-ë < *-ai < *-an in Japanese.

9.42 Suffixed *-i

It is possible that the other referent-focus marker (*-i) is genetically related to the Old Japanese 'infinitive' verbal -i suffix, represented by -ï (< *-ui) and -ë (< *-ai) as well as by simple -i. There is another Austronesian candidate: the 'close transitive' *-i suffix of the Oceanic languages (Blust 1977), a comparison that has already been made by Kawamoto (1977). In the same paper Blust makes note of the existence in some non-Oceanic Austronesian languages of a 'local transitive' *-i , as in Wolio tuktuk-i 'pulverize' (see POUND). He does not connect either of these, which appear to be related to each other, to the referent-focus marker *-i, but one can readily understand how an element of this kind ('give to', 'buy for', etc.) might have acquired a general transitivizing role. If the Japanese verbal -i is indeed a descendant of an earlier referent-focus marker *-i - and the question is likely to remain moot - one would have to posit a similar expansion in function, in general role rather than simply as a transitivizing suffix.

Blust (1977) points out that final *-i forms in Proto-Oceanic have typically become fossilized, with the *-i often treated as root-final. These residual products are frequently nominal, e.g., P-Hesperonesian *ʔunap '(fish) scale', P-Polynesian *ʔuna(fi) 'to scale; scale' (the Kadai cognates include both verbal and nominal forms - see Benedict 1975:370). Japanese shows a parallel development; cf. kat-i ~ kati (below under RISE/); also under CUT (OFF/IN TWO): tat-i 'cut off' ~ tati 'long sword'; under PUS: um-i 'fester' ~ umi 'pus'; also the cognate sets listed below, all with Japanese -i derivatives (in ROUND with different accents) and, with one exception (BEAT/), all with unsuffixed (or -po) allofams. In BEAT/ the -i derivative ('hammer') is exactly matched in Oceanic (Martin 1979); in RISE/ the *-i derivative also appears in Hesperonesian but in the basic referent-focus marker role, while in EAT/ there is another precise matching of the *-i derivative ('meal'), this time in Miao-Yao (Miao). This evidence argues very strongly for an identification of Japanese -i with the referent-focus marker.

BEAT/: P-Austro-Tai *tutuh
*tutuh-i 'hammer ' > tutui (> tuti)
EAT/: P-Austro-Tai *(ma-)ka? > maka- '(feed =) cater'
*ka?-i 'meal' > *kai > kë
GREEN/: P-Austro-Kadai *hidzaw-i > awi > ai 'indigo'
+ *-po > *aw-wo > awo > ao 'blue'
RISE/: P-Austro-Kadai *tśaka > taka- 'high'
*(ń)tśaka-i > *takai > takë 'height'
*tśaka-t > kat-i 'win'
> kati 'victory'
ROUND: P-Austro-Kadai *(m)baḷuR > maru- 'round'
+ *-po > *maru-wo > maro 'circle'
+ *-i > *marui > *marï > mari[3] 'ball'
> *marui > *marï > mari[2]
'bowl'
SHALLOW: P-Austro-Japanese *[q.?]a[ts,tš]a[t,c] > asa- 'shallow'
+ *-i > *sai > se 'shoal'
SPREAD/: P-Austro-Kadai *(m)biḷaj > Fira- 'flat'
+ *-i > *Firai > Fire 'scarf; fin'

In RISE/ the referent-focus marker *-i has been incorporated into a widespread Austronesian derivative of the basic root: *(n)ts$_{123}$akay '(rise/climb upon =) mount, ride' while another Austronesian derivative: *tsi$_{123}$akat 'climb' has the rare suffixed *-t, of uncertain origin. Japanese also has a *-t suffix derivative of this root: kat-i '(rise above =) surpass, win' ~ kati 'victory'; hence this rare suffix can provisionally be set up at the Proto-Austro-Japanese level, with mainland evidence available (Benedict 1975:148) for an even earlier level.

Japanese also appears to have suffixed *-i derivatives in two 'nature' roots: GUM (OF TREE)/ and SNAKE (see Glossary), both apparently of nominal rather than verbal origin, on the basis of the known cognates in Kadai and Austronesian, respectively. It is possible, however, that in both cases the P-Austro-Kadai- or Proto-Austro-Japanese-level root involved was in fact verbal: 'the flowing substance', 'the crawler', etc. In

the former case a 'vegetable kingdom' suffixed *-i is another possibility; cf. FRUIT/ - Note.

9.43 Suffixed *-k

Dahl (1980) describes *maka- in Hesperonesian as a 'factitive prefix' and makes use of it in analyzing P-Malayo-Polynesian *makəmpu 'grandchild', an apparent derivative of the *ʔa(m)pu ~ *ʔə(m)pu 'grandparent/grandchild' root: a grandchild makes the parent's parent a 'grandparent'. This appears to be a double prefix: *ma- (9.1) + -ka-, the latter possibly related to the non-productive suffixed -k of Japanese, as represented in Jp. ituk-i 'deify' < itu 'divine power' (see SPIRIT/). Miller (1983a) distinguishes between a suffixed -k for 'become', as in sirak-i 'become white' < sira- 'white' (see LIGHT/), which he compares with P-Altaic *-q of similar function, and suffixed -k for 'do', as in wanak-i 'throttle' < wana 'collar', the latter more clearly a 'factitive' suffix. The double prefixation is of a rare type for Austronesian (Paiwan has an unrelated ma-ka-) and it is possible that an originally suffixed *-k element was 'captured' and moved forward, thus making the Japanese position the original slot for this element.

9.44 Suffixed *-po

This adjectival suffix in Japanese appears to be isolated in the Austro-Tai stock but is historically significant because it serves to maintain final *-p (see EMPTY/, below). It can be reconstructed as *-po, retained as such after final *-p but taking the form of -wo > -o elsewhere, with regular *p > /w/ shift before *o (7.12); cf. the following:

EMPTY/: P-Austro-Kadai *ga[r,R]ap > kara
> karappo
GREEN/: P-Austro-Japanese *hidzaw > aw-i > awi > ai 'indigo'
> *aw-wo > awo > ao 'blue'

ROUND: P-Austro-Kadai *(m)ba|uR > maru- 'round'
> *maru-wo > maro 'circle'
LIGHT/: P-Austro-Kadai *[ts,tš]ilaR > sira- 'white'
> *sira-wo > siro 'white'

This suffix exhibits an affinity for color words; to 'blue' and 'white', above, add kura- ~ kuro 'dark/black'.

10.0 Lexical features

The cognate sets that have been uncovered to date exhibit in general a 'core' quality, featuring such reliable items (see Benedict 1983d) as the verbal pair: DIE and EAT and the nominal pair: DREAM and NAME. There are a few surprises, e.g., RASH (SKIN) at the Proto-Austro-Japanese level, and the etymologies for the four direction terms (see GOD/ for 'south'), but on the whole the representation is about what one might expect at the early level involved. Both the pronominals (10.1) and the deictic/locatives (10.2) are well represented, along with the several numerals (10.3) and kinship terms (10.40 - 10.45). There is not, in fact, a significant gap anywhere in the lexicon.

The body part words, perhaps the 'core of core' vocabulary items, make up a surprisingly large segment of this corpus of roots. A virtually complete Austro-Tai/Japanese manikin can, indeed, be formed from these cognate sets, lacking only terms for the internal organs: HAIR^{I} > Jp. 'body hair; (compound) head hair', HAIR^{II} > Jp. '(compound) head hair; beard', HAIR/ > Jp. '(compound) eyebrow', EYE, EAR (under BORDER/), CHEEK, CHIN, JAW (under HOLD TOGETHER/), MOUTH, TOOTH, TOOTH/FANG > Jp. 'canine (tooth)'; also BODY, BACK, BACK/BEHIND, RIBS, BELLY, NAVEL, BREAST, BREAST (under PEAK), VULVA (under OPENING/), PENIS > Jp. 'vulva' (with Philippine parallel in Austronesian); also SHOULDER, HAND (under GRIP/), THIGH, LEG/FOOT; also FLESH, SKIN, BONE, BLOOD (under FLUID)(with Austronesian parallel); also PUS, SPIT/, SPITTLE/. The list is so simple that one tends to wonder about the rare absence of cognate sets for other key body part words, e.g., for NOSE there was perhaps replacement by 'trunk' (see FRUIT/ - Note); for PENIS there was replacement by a derived form: 'the excreter' (9.31) along with a semantic shift to 'vulva', paralleling that seen also in

Austronesian. Even the animal body part words are well represented in these cognate sets: HORN, TAIL (under HIND-PART), WING (under BEAT/), with shift from FEATHER to ARROW, both with parallels in Austronesian. The multiplicity of correspondences in these 'core of core' body part words, quite apart from other correspondences, constitutes an unassailable demonstration of the basic Austro-Tai/Japanese relationship.

10.1 Pronominals

Only one pronominal has been maintained in Japanese-Ryukyuan but it is the key one for 'I', represented both in Kadai and Miao-Yao as well as in Austro-Japanese. Additionally, Japanese-Ryukyuan has a highly significant doublet here, serving to establish the *ʔu- topic marker at the Proto-Austro-Japanese level, with support furnished by the same feature in CHILD and other nominal forms. As for the 2nd and 3rd person pronouns, Old Japanese has as enclitics the two personal nominative markers (*ʔi-, *tsi-) that have been reconstructed at the Proto-Austro-Japanese level.

10.2 Deictic/locatives

This category is also well represented in Japanese, with cognate sets involving four such roots: DEICTIC/SUBORD.PARTICLE and THAT/PRONOMINAL (3rd) as well as PLACE/LOCATIVE^{I} and ^{II}. The first pair had already been reduced to fossilized subordinating particles (-tu and -na) at the Old Japanese stage of the language while the third (-ka) was hardly productive as a locative particle but did function at that stage as a deictic ('that'). The fourth, for which an early (Proto-Austro-Tai level) doublet has to be reconstructed, has an unusual double representation in Japanese, which has both the fossilized bound form -ti (< *-ti) and the fully functional nasal increment form -ni (< *-ndi).

10.3 Numerals

The Proto-Austro-Tai decimal numeral system, as reconstructed on the basis of Austronesian and mainland (largely Kadai) forms (Benedict 1975:211– 8), had already undergone extensive modification and replacement at the Old Japanese stage. As is usually the case, the higher numerals were the most affected, with replacement of 'seven' through 'nine', yet there was a surprising retention of '100' in addition to '10', only the latter represented in the mainland languages.

The three 'middle' numerals: 'four', 'five', and 'six' were also retained, with evidence of reduplication in the latter two, a feature frequently encountered in Austronesian numerals; cf. Jp. momo '100' (along with -bo); also nana- 'seven' and kokono- 'nine'. Jp. mi- 'three' was innovative, perhaps fashioned after mu- 'six', while both Futa- 'two' (< '2nd in a series') and Fito- 'one' (< 'one of a pair') involve replacement of the regular numerals by specialized forms. In the case of 'one', the regular root survived in a compound with 'ten' (so), paralleling an Austronesian (Philippine) formation, as well as in mythic names (Izanaki, Izanami). In the case of 'two' the survival is speculative (see the suggested etymology of Jp. waza in 7.61). In addition, the basic (Proto-Austro-Kadai) root for 'pair' is clearly in evidence in OJ Fata '(two tens =) 20'.

10.40 Kinship terms - the basic pattern

The Japanese kinship terms make up a simple system that reflects emphasis on the nuclear bilateral family, as described in some detail by Spencer and Imamura (1950). A similar bilateral system has also long been considered a basic feature of Malayo-Polynesian social organization. Kroeber (1919) reconstructed a bilateral system for the Philippines and the classic work by Murdock (1949) presents a similar (Hawaiian or generation type) system for 'ancestral Malayo-Polynesian'. On the surface, then, it would appear that this typological evidence justifies the setting up of the same kind of system at a still earlier Malayo-Polynesian/Japanese level. As is often the case, however, the linguistic

evidence points in a quite different direction, viz., towards an earlier system of descent groups with prescriptive (matrilineal) marital alliances. The evidence on the Malayo-Polynesian (or Austronesian) side has become both extensive and complex with the recent addenda by Blust (1980c), but the matter merits some attention here because of the searching light that it throws upon Japanese vis-à-vis Austronesian and Austro-Tai generally.

In an early (1967) study of Austro-Tai kinship terms (Benedict 1975:65–74), the writer pointed out that a 'skew' in the Tai terminology, with 'nephew/niece' equated with 'grandchild' (P-Tai *hlaan^{A} - F-K. Li 1977:137), is to be interpreted as reflecting an original 'skew' in the reciprocal 'uncle/aunt (parent's sibling)' and 'grandparent' terms for his parents-in-law (= uncles/aunts under cross-cousin marriage rules). Both Mak and Mulao, in the Kam-Sui group, show the Tai 'skew' and, as emphasized by the writer (1975), in Mak the term (laan^{A-h}) is also applied to a cross-cousin: father's sister's daughter, as in the phrase: ʔa:u laan 'to marry a father's sister's daughter (very common)' (F-K. Li 1943 - writer's translation). In the same study the writer pointed out that the Oceanic (Martin 1979) and Fijian shift from 'grandparent' to 'mother's brother' in the basic P-Austronesian *ʔa(m)pu etymon can be viewed as part of the same over-all picture on the vast Austro-Tai canvas, with the Fijian (Bau, Nadrau) prescribed marriage with father's sister's daughter corresponding precisely to the Kadai (Mak) pattern. He concluded (1975:71–2) that his analysis 'strongly suggests that an archaic kinship system with very specific features, as delineated above, underlies the present terminologies found in this broad area.'

This was an extremely far-reaching conclusion, indeed, even for the writer, but some support has now been found for it, in part from the Japanese-Ryukyuan evidence, in part from the extensive Austronesian data that has been marshaled by Blust (1980c). The Japanese-Ryukyuan evidence is by far the simpler and is presented first.

P-Japanese-Ryukyuan *[b,p]ui 'nephew/niece' is reconstructible on the basis of OJ woFï 'nephew' (wo- 'male'), meFi (= meFï) 'niece' (me- 'female'), Ryukyuan: Yonaguni bui-ha 'nephew/niece' (-ha not

analyzed). This is the Japanese representative of the widespread P-Austro-Tai *?a(m)pu 'grandparent/grandchild' root, significantly with the suffixed -i that appears also in Jp. kamï < *k-amu-i 'gods' (see ANCESTORS/) and Jp. ti<*tï<*tu-i 'father', from P-Austro-Japanese *da[t,C]u-t (see HEAD (OF LINEAGE)/). This is specifically the Jp. -i 'kinship' suffix for older-generation terms as opposed to the -a suffix appearing with other terms (10.44, 10.45), hence we can infer that the earlier (Proto-Japanese-Ryukyuan) meaning was 'uncle/aunt', the reciprocal of 'nephew/niece'. We can also infer a still earlier 'grandparent' meaning (cf. the Oceanic shift, above), with gaps in the system to be filled in by secondary terms, and this is precisely what we find in Japanese (the relevant Ryukyuan data not on hand): ozi 'uncle'< 'little father', ozii(-san) (redup.) 'grandfather'; oba 'aunt' < 'little mother', obaa(-san) (redup.) 'grandmother'.

The Austronesian terms tend to be self-reciprocal, like that cited above for 'grandparent/grandchild', and there is mainland evidence (Benedict 1975:69) for setting up this feature at the Proto-Austro-Kadai or earlier level. The Japanese evidence furnishes welcome support here but, beyond this, supplies a vital place in the over-all Austro-Tai picture delineated above. Just as an original term for 'grandparent/grandchild' can yield an 'uncle/aunt' term, as surely happened in the Oceanic area, so also it can yield a 'nephew/niece' term, as in Japanese and Fijian (Bua)(see GRANDPARENT ~ GRANDCHILD/ in Glossary). One can argue, of course, for independent, albeit strikingly parallel, innovations in these several areas (Kam-Tai, Oceanic, Japanese) of Austro-Tai, but surely a strong case can be made out for a proto-system of descent groups with prescriptive cross-cousin marriage.

The writer did not follow up on his original findings, but Blust (1980c), working quite independently, took note of the Oceanic 'grandfather' > 'uncle' (mother's brother)' shift and reached conclusions very similar to those presented above. He even set up Proto-Malayo-Polynesian roots for the key terms involved in a proto-system of this kind: *ma(n)tu?a 'mother's brother/wife's father' and *?aya 'father's sister'. As pointed out by Dahl (1980) in his invited Comment on the study, the

former is simply the *ma- prefixed (9.20) derivative of P-Malayo-Polynesian *tu?a 'old'. In an attempt to reconstruct this root at the earlier Proto-Austronesian level, Blust compared Bunun (Paiwanic) mastúhas 'older brother', calling the -s-'unexplained'. Actually, the full form (Ogawa and Asai 1935) is masi-tohas (cf. masi-noba 'younger brother'), with -tohas < *-tuhas from P-Paiwanic *tuqas 'old' = Thao tantu:qas 'older brother', Ami mato?asai 'old man', the latter with prefixed *ma-. In addition, the Hesperonesian cognates listed by Blust (1980c:219) generally have 'uncle/aunt' and/or 'parent-in-law' glosses that do not differentiate for sex, paralleling P-Polynesian matu?a 'parent'. It seems evident, especially in view of the Formosan evidence (Blust cites only the misconstrued Bunun form), that a proto-gloss such as 'mother's brother/wife's father' can hardly be reconstructed for this etymon, even at the later Proto-Malayo-Polynesian level. It is also clear, however, that the consanguineal/affinal equation involved is not a local feature but extends throughout most of the Malayo-Polynesian area.

The other member of the Blust pair, *?aya 'father's sister', presents a radically different picture. The root is represented by a variety of forms, often prefixed and/or suffixed, with meanings ranging from 'father', 'mother', 'uncle', and 'aunt (usually father's sister)' in Malayo-Polynesian to 'mother' in Atayal and 'older sister' in Pazeh. Blust reconstructs the Proto-Malayo-Polynesian gloss as 'father's sister', partly to fill a gap in the system, although this hardly explains the 'father' and 'uncle' meanings. It should be noted, in this connection, that P-Austronesian *?a(m)pu has the basic gloss *grandparent/grandchild' without specification for sex, and that the Japanese cognate -Fï 'nephew/niece' has the same feature, hence one can reconstruct along these lines at the earlier Proto-Austro-Japanese level. It would seem not unlikely for the proto-system to have had an equivalent term for 'parent', also without specification for sex, and the marked polysemy shown by the *?aya root in Austronesian is best accounted for by setting up the Proto-Austronesian-level gloss simply as 'parent', with the anticipated extensions to 'uncle' and 'aunt' as well as to 'older sister' (Pazeh yah). Thus both the 'mother's brother' and 'father's sister' proto-glosses

reconstructed by Blust seem to be unjustified and it appears that the system failed, for reasons that remain unclear, to develop basic kin terms of this kind. Perhaps the widespread use of teknonymy, as reflected in the semantic development of *?a(m)pu (above), played an essential restraining role here by making for easy replacement.

10.41 Kinship terms - the nuclear sets

Japanese exhibits an unusual range of Austro-Tai correspondences in this group of cognate sets, which involve terms only 'one step' from ego, with specific ties to both Kadai and Miao-Yao as well as to Austronesian. It supplies some key evidence for reconstructing two of the three generational terms at the Proto-Kadai level, if not earlier: *papa 'mother' (Japanese and Kadai) and *(?u-)?alak 'child' (Japanese, Austronesian, and Kadai). Japanese also has a special term: musu- for 'child (of a speaker)', probably retaining an original distinction as opposed to the meaning ('youngest child') assigned to the Hesperonesian cognate (see CHILD^{II}). On the basis of P-Austronesian *?ama 'father', one can infer that the proto-system showed a reversal of the usual ('universal') pattern, with /pa/ for 'mother' and /ma/ for 'father', thus supporting the above reconstruction for the 'mother' slot in the system. A further inference would be that both Kadai and Japanese have replaced the original 'father' term. And this is clearly the case: P-Tai *boo^{C} 'father' (F-K. Li 1977:66, 277) is an early loan from Chinese while P-Kam-Sui *buu^{B} and Laha a:u 'id.' are from the *?a(m)pu root (see GRANDFATHER ~ GRAND-CHILD/): Jp. ti ~ titi 'father' is the *-i suffix derivative (10.44) of a root with titular associations (see HEAD (OF LINEAGE)/), with the original 'father' term transferred to the 'other world' (10.42)

In the sibling terminology, the Japanese evident makes it possible to reconstruct P-Austro-Kadai *?a(ń)ji in the 'older sibling' slot while an additional Ryukyuan/Tai correspondence suggests P-Austro-Kadai *?abi in an 'older brother' slot. It is further possible that the latter was one of a pair of sibling terms exhibiting sex-of-speaker distinction: 'older brother (female speaking)', the reciprocal of *?imu-a 'younger sister

(male speaking)', which is the gloss of the Japanese representative (imo), with the Miao-Yao (Yao) cognate: *mua^{C} 'younger sister' showing simple loss of the distinction.

It must be noted in this connection that Jp. imo has its own reciprocal term within the language itself: OJ se 'older brother (female speaking)', Jp. 'a woman's familiar call for her husband or older brother'. This is perhaps from an earlier *së < *sai and thus a possible cognate of P-Kadai *C$_{1}$ańcay$^{A/B}$: P-Southern/Central Tai *jaay^{A} 'male, man' (K-K. Li 1977:169), from *ńcaay^{A}; P-Kam-Sui *say^{B}: Mak sai 'male of birds', Maonan sai, Kam səi, Sui hai, Mulao tai '(compound) cock', Lakkia kyei^{A} '(compound) man (male), husband, son, grandson', but the indicated Proto-Austro-Kadai medial *-c- should have yielded Jp. t- (7.12), hence a medial *-c- ~ -ts- doublet would have to be set up.

10.42 Kinship terms - the 'other world'

Two terms from the original parental/grandparental set are represented in Japanese by a pair of key words for spiritual beings of the 'other world': Jp. kamï 'gods' < *k-amu-i, based on the Proto-Austro-Kadai root: *ʔamu 'great-grandparent/ancestor', Jp. tama 'ghost < *t-ama, based on the Proto-Austro-Japanese root: *ʔama 'father' (10.41). In addition to supplying valuable clues to students of this aspect of Japanese culture, these words also serve to help establish these roots at early (Proto-Kadai, Proto-Austro-Japanese) levels.

10.43 Kinship terms - prefixes

Prefixed *t- is widespread with kin terms throughout Austronesian, e.g., Blust (1980c) reconstructs P-Malayo-Polynesian *(t-)ama 'father' and *(t-)ina 'mother', and *t- prefixed terms also appear frequently in Paiwanic as well as in Tsouic (Kanakanabu) and in Atayalic (Sediq), confirming the Proto-Austronesian status of the prefix. Blust (1980c:214) describes this prefix as basically a referential element, as opposed to the vocative suffixes (10.44). This prefix has not yet been traced to any

mainland language, but it does appear in Jp. t-ama 'ghost' (10.42), and hence can be reconstructed at the Proto-Austro-Japanese level.

Prefixed *k- is rare, appearing in Paiwan (parent terms) and Fijian (see ANCESTORS/), and apparently served originally as a 'prefix for deceased persons', as in Atayalic (Egerod 1980). It is represented in Japanese, along with suffixed *-i (10.44), by the word for 'the gods': kamï < *k-amu-i (10.42), and hence can be given a place alongside prefixed *t- at the Proto-Austro-Japanese level.

Both these consonantal elements were clearly prefixial in nature. In addition, the Austronesian kin terms exhibit two distinct patterns that appear to reflect archaic (Proto-Austro-Japanese level or earlier) vocalic prefixes, each represented in Japanese-Ryukyuan; cf. the following:

P-Austronesian *?a(m)pu ~ *(m)pu 'grandfather/grandchild'; see GRANDFATHER ~ GRANDCHILD/): Jp. -Fï < *-pu-i

P-Austronesian *?aki 'grandfather'; see GRANDFATHER/: Jp. öki < *?aki-

P-Austronesian *?amu 'great-grandparent/great-grandchild'; see ANCESTORS/: Jp. kamï < *k-amu-i

P-Austronesian *?ama 'father'; see FATHER/: Jp. tama < *t-ama

P-Austronesian *?aya 'parent' (See 10.40 for reconstructed gloss.)

P-Austronesian *?aka 'older sibling' (Blust 1980 cites *aka ~ *kaka.)

P-Austronesian *?a(ń)ji 'younger sibling'; see SIBLING (OLDER)/: Jp. ani ~ ane

P-Austronesian *?ina 'mother'

P-Malayo-Polynesian *?ibu 'mother'; cf. PEAK ... BREAST: P-Austro-Tai *(m)bu(m)bu

The distinctive *?i- in the last 'feminine' group, as opposed to *?a- in the large (basically) 'masculine' group, is replicated in Japanese-Ryukyuan: Ryukyuan: Shuri afi < *?abi 'older brother', Jp. imo < *?imu-a 'younger sister (male speaking)'. Japanese-Ryukyuan thus provides excellent evidence for the reconstruction of a 'masculine' *?a- as opposed to a 'feminine' *?i- element in Austro-Tai kin terms.

10.44 Kinship terms - suffixed *-y > *-i

The Austronesian languages exhibit a series of suffixes, largely if not exclusively of vocative origin, which contrast with the referential *t- and *k- prefixes of kinship terms. Zorc (1978:94) lists these for Proto-Hesperonesian as *-ŋ, *-ʔ, *-h, and *-y and cites inter alia Toba amáŋ, Bikol ʔamáʔ, Aklanon ʔamah and Hiligaynon ʔamay 'father', all from P-Austronesian *ʔama. Suffixed *-y is well represented in the Philippines, e.g., Proto-Manobo *ʔamay 'father', *ʔinay 'mother' (Elkins 1974), from P-Austronesian *ʔama and *ʔina, and appears also in Oceania, e.g., P-Polynesian *tama < *t-ama 'child' < *ʔama 'father' (Tongan, Tikopian). Proto-Austro-Japanese final *-ʔ, *-h, and (in most cases) *-ŋ all yielded Jp. [0] (7.13, 7.44); hence only suffixed *-y, which was regularly vocalized to *-i in Japanese (6.6), provides a reasonable opportunity for tracing in Japanese. Three different forms in the language, all originally older-generation terms, have the (reconstructed) *-i, which apparently differentiated such terms from those for kin of ego's generation, which took suffixed *-a (10.45); cf. the following:

ANCESTORS/: P-Austro-Kadai *ʔamu > *k-amu-i > kamï

GRANDFATHER ~ GRANDCHILD/: P-Austro-Tai *ʔa(m)pu > *-Fu-i > -Fï

HEAD (OF LINEAGE)/: P-Austro-Japanese *da[t,C]u > *tu-i > *tï > ti

Note that in the first of this trio the Japanese form reflects both suffixed *-i and prefixed *k-, closely paralleling P-Polynesian *tamai < *t-ama-i 'father, cited above. Note also that in the second root the Miao-Yao (Yao) cognate reflects a matching *-i suffix.

10.45 Kinship terms - suffixed *-a

P-Austro-Tai *-a(n) can be set up as a 'kinship' suffix on the basis of Paiwanic *-an and Oceanic *-a (< *-a or *-an), P-Kadai *-an ~ *-a, and

P-Miao-Yao *-a, as represented in ANCESTORS/, FEMALE/, GRANDFATHER ~ GRANDCHILD, GRANDFATHER/, and SISTER (OF MAN/YOUNGER). It is best represented in Paiwanic, appearing in a number of reduplicated and prefixed forms, often of referential type, suggesting that it has been modeled after the referent-focus marker *-an (9.31). Significantly, it appears in Paiwanic in the FEMALE/ root (see Glossary), where it closely parallels the suffixed *-a reflected in both Kadai and Japanese. In addition to its appearance in this root, it is also reflected in the Japanese representatives of the SIBLING (OLDER) and SISTER (OF MAN/YOUNGER) roots, indicating a distinction from the suffixed *-i with older-generation terms (10.44); cf. the following:

FEMALE/: P-Austro-Tai *(m)bəhi-a > *mi-a > me
SIBLING (OLDER): P-Austro-Kadai *ʔa(ń)ji > ani ~ *ani-a > ane
SISTER (OF MAN/YOUNGER): P-Austro-Tai *ʔimu-a > *imu-a > imo

It would appear, from the above grouping, that this suffix in Japanese was applied only to female kin.

10.5 Lexical differentiation

Most of the cognate sets uncovered in this study do not exhibit any significant range in meaning. In others there is a clearly defined line of semantic development, at times more than one, and these do not require any special examination, e.g., BLOW ... WIND > Jp. 'wind', BORE/PIERCE/TUBE/PIPE > Jp. 'pipe', HAND/FIVE > Jp. 'five'. In some sets of this kind the derived meaning has become the more prominent one in Japanese, notably BORDER ... EAR > Jp. 'ear/border', DIE/END > Jp. 'end/die', GOD ... SUN > OJ 'spirit' ~ 'sun' > Jp. 'sun', WILDERNESS ... > OJ 'uninhabited area' ~ 'mountain' > Jp. 'mountain'. On occasion the cognate set is held together only by a core of meaning, with the Japanese development proceeding in

one direction and the development(s) elsewhere proceeding in other direction(s); cf. the following:

RECITE/ > Hesperonesian 'recite (deeds)' > 'speak/converse' > Jp. 'recite' ~ 'chant/sing'

SNAKE > Hesperonesian 'snake' ~ 'worm' Jp. 'large snake'

OPENING > Hesperonesian 'anus' > Atayalic 'wall opening' = 'window' > Tai 'animal hole' = 'den/lair' > Ryukyuan 'anus' > 'arse' > Jp. 'vulva'

In almost a dozen roots Japanese appears to have maintained an earlier (core) meaning in a given cognate set, as indicated in some cases by cognates elsewhere; cf. the following:

ANT/: Jp. 'ant'; Hesperonesian 'termite' but Pazeh 'ant'.

EMPTY/: Jp. 'empty' > 'slough/corpse'; only the latter in Tai.

FALL: Jp. 'fall (general sense)'; Hesperonesian 'let fall slowly', Tai 'fall (as leaves)'.

FAST/: Jp. 'fast; (compound) storm'; Hesperonesian '(blow fast =) storm'.

HOLD/: Jp. 'hold'; Tsouic 'hand/arm' but Javanese 'grasp'.

NOISE/: Jp. 'sound/noise'; Austronesian and Kadai 'fart'; cf. Jp. onara '(little sound =) fart'.

SMALL/: Jp. 'small'; Hesperonesian 'thin' but Saisiyat 'small'.

SNAIL/: Jp. 'snail'; Tai 'worm/maggot' but Saisiyat 'snail'.

SPIT/: Jp. 'spit'; Hesperonesian 'chew out [betel]' ~ 'betel cud' but Yami and Ami 'spit'.

STALK/: Jp. 'stalk'; Hesperonesian '(body stalk =) foot, leg'.

SWAMP/: Jp. 'swamp'; Hesperonesian 'irrigated field'.

As indicated by the above, Japanese has tended to be conservative in this area of semantics. The rare innovations have usually been of a simple

type, e.g., verb > noun in two sets: BORE/ > Jp. 'gimlet/awl', WINNOW/ > Jp. 'winnower'. Another pair, however, are on the imaginative side: STEAM/ > Jp. 'hot water', OPPOSITE SHORE/ > Jp. 'island' (eminently fitting for the Yamato people). In one set the meaning has been generalized: BIRD[II] > Jp. 'bird' (< 'large bird'), in another specialized: EXCHANGE/ > Jp. 'sell'. In several sets the innovation is paralleled elsewhere, at times in a dramatic manner; cf. the following:

ABOVE/ > Jp. 'north'; paralleled in Tai.
CHEW/ > Jp. 'cooked rice'; paralleled in Tai.
FEATHER > Jp. 'arrow'; paralleled in Paiwanic.
FIELD (DRY)/ > Jp. 'tuber (edible)'; paralleled in Hesperonesian.
FLUID/ > Jp. 'juice' ~ 'broth/soup'; paralleled in Hesperonesian.
> Jp. 'blood'; paralleled in Hesperonesian.
FOREST/ > Jp. 'wild'; paralleled in Tai.
HIND-PART/ > Jp. 'tail'; paralleled in Oceanic.
GRIP/ > Jp. 'hand'; paralleled in Hesperonesian.
HOLD TOGETHER/ > Jp. 'valley'; paralleled in Polynesian.
> Jp. 'jaw/chin'; no known parallel.
LIGHT/ > Jp. 'white/gray'; paralleled in Polynesian.
LIVE/ > Jp. 'clan'; paralleled in Polynesian.
PENIS/ > Jp. 'vulva'; paralleled in Hesperonesian.
SIDE (OPPOSITE)/ > Jp. 'bark cloth'; paralleled in Polynesian.
SPREAD/ > Jp. 'flat'; no known parallel.
> Jp. 'leaf'; paralleled in Polynesian.
STEEP/ > Jp. 'slope'; paralleled in Paiwanic (Saisiyat).
TUSK/ > Jp. 'boar'; paralleled in Formosan.

It is possible that in some of these roots, e.g., GRIP/ > 'hand', the derived form was already present at the earlier level (Proto-Austro-Japanese in this case) and was simply inherited as such in both

Hesperonesian (in this case) and Japanese. This is particularly true in the case of SIDE (OPPOSITE)/, where parallelism seems highly unlikely; one might even entertain the idea of an early loan for this root although the complex phonology involved (7.44) makes this view rather unattractive.

11. Proto-Austro-Japanese

Japanese has been assigned a position within the Austro-Tai stock close to Austronesian but this must be regarded as provisional. One could hardly hope for more in view of the fact that linguists still engage in lively dispute over subgroupings within Austronesian itself and even -to cite an extreme case - those within Indo-European! One cannot fail to be impressed, however, by the numerous and often highly specific lexical correspondences shown by Japanese (Japanese-Ryukyuan) with the Austronesian languages, especially with the conservative Formosan group. These far outweigh the special lexical ties with Kadai and, even more so, those with Miao-Yao. The Japanese-Ryukyuan/Formosan correspondences do not, when viewed from a broad perspective, suggest that Japanese and Formosan can be placed in a single subgroup, as opposed to Malayo-Polynesian, the main body of the Austronesian family. They do suggest, however, that the two may have been in prolonged contact for a period of time following the primary Formosan/Malayo-Polynesian split, which may well have taken place on the mainland (see 12).

In comparison with Kadai, by far the nearer of the two mainland families, Japanese has about as many correspondences with Austronesian in the pronominal and deictic-locative categories but fewer in the basic 1 - 10 numerals (but curiously retains '100'), where there is close Kadai/Austronesian agreement at the earliest (Proto-Kadai/Proto-Austronesian) level. Japanese appears to come off second best to Kadai here, but in its retention of morphological elements, as reconstructed on the basis of Proto-Austronesian features, it is far closer to Austronesian. This fact, along with the abundance of specific lexical ties, has led the writer to place the Japanese-Ryukyuan languages in an Austro-Japanese subgroup, as presented in the diagram at the beginning of this study.

At least three general caveats are in order here. Austronesian is much, much better known than Kadai, and Kadai than Miao-Yao, hence in a very real sense we are comparing bodies of material that are not strictly comparable. This fact in itself tends to minimize Japanese correspondences with the mainland languages in favor of those with the Austronesian family. Secondly, the mainland languages have all become monosyllabic and therefore can hardly be expected to compete with the (largely) disyllabic Japanese-Ryukyuan languages in reflecting the original morphological elements. As a final word of caution, the extreme distortion suffered by both the Kadai and Miao-Yao languages in the monosyllabization process, vastly complicated by the areal phenomenon of vocalic transfer, has made comparative Austro-Tai research in these two families a most formidable undertaking; one can overlook the 'obvious' for years, hence we can be sure that a treasure house of Austro-Tai correspondences remains to be uncovered there. The Japanese field offers only child's play in comparison, even for the writer, who is not (unfortunately) a Japanologist. We can only, as a result, say of a given Japanese/Austronesian correspondence: no cognate has yet been uncovered on the mainland, with emphasis on the 'uncovered'.

12. Discussion

It has long been unfashionable to attempt to link proto-languages with early cultural horizons, e.g., at the Toronto symposium on Austro-Tai in 1976 the presentation by Gedney (1976) included the two standard arguments raised in this connection:

(1) 'The time depth that the archeologists are usually talking about, tens of thousands of years ago, is much too early for these linguistic questions.'

(2) 'The archeologists' analyses of their data on the sites they have discovered tell us nothing about what language was spoken by the inhabitants.'

The writer is not a Japanologist but he *is* an anthropologist and was reared in a tradition that embraced both linguistics and archeology/prehistory under the 'study of man'. The evidence from these two fields of study can at times be joined to yield conclusions of the most compelling kind - and this is one of those times. The time depths involved here are in 'thousands', not 'tens of thousands' of years and are quite manageable (see below). As for Gedney's second point, it is true that archeologists have not yet dug up any Austro-Tai inscriptions in Japan, but they may as well have inasmuch as the linguistic evidence has stamped on it: MADE IN AUSTRO-TAI.

The key fact about Japanese archeology is the abrupt cultural change that occurred in the islands ca. 300 B.C. The early culture was that of a fishing and hunting people, living in pit-dwellings and gathering edible roots, acorns, and nuts. This primitive culture has been named Jōmon, after the characteristic straw-rope pattern of its crude earthenware (Kawahara 1983). It appears to have been related to similar early cultures opposite Japan, but we have no direct evidence as to the language(s) spoken by this early population.

This primitive culture was rather abruptly replaced by an advanced rice-cultivating and metal-working culture, called Yayoi. The well-known Itazuka site (Fukuoka Prefecture), where excavations began in the 1950's, has yielded Yayoi-style pottery from the Late Jōmon (1,000–300 B.C.) -Early Yayoi (300–100 B.C.) periods, showing that the two cultures existed simultaneously for a brief period, at least (Kawahara 1983). Numerous paddy field remains at various sites in Japan have revealed the same picture.

The Yayoi culture was clearly intrusive and was spread by a new population reaching Japan at that time. The most recent findings (W. Solheim: p.c.) indicate that this movement is to be dated as early as 1,000 B.C. The early center of the culture was the southern island of Kyushu, with gradual spread to other regions of Japan. As in similar cases elsewhere, the newcomers were gradually absorbed into the indigenous population even while making their cultural contribution. This is indicated particularly by the findings of physical anthropology; cf. the following statement in an authoritative article by Gordon Bowles (1983):

> The Yamato of history are probably mainly descendants of the Yayoi cultivators with regionally varying admixtures of the earlier Jōmon population...

How is one to identify the Yayoi people linguistically? They left no inscriptions, to be sure, but they can be 'tagged' by items from the 'high culture' that they introduced into the islands. The hallmarks of this 'high culture' were wet-rice agriculture and metal-working. In the case of metal-working, the primary 'tags' are represented by the words for 'metal': Jp. kane and 'mold': Jp. kata. The latter is a typical Japanese derivative with nominalizing -a suffix (9.31) from a Proto-Austro-Japanese root: *makatš'hard' > Jp. kata-i. What is more, Jp. kane 'metal' may be from the same *makatš root, in a compound with -ne 'ridge' (see PEAK/ - Note), the reference being to the characteristic ridges produced by molds in cast metal objects. All in all, the evidence for an Austro-Tai origin of the early Japanese metallurgical terminology is quite substantial.

The evidence for an Austro-Tai origin of the early Japanese agricultural terminology is far more than substantial; it is truly overwhelming. Every phase of agriculture is involved, from the field itself to the final product (rice), with the strongest lexical ties (indicated below in right margin) to Austronesian, especially to the Formosan languages:

'paddy field': Jp. ta; see EARTH/. Austronesian and Kadai
'to plant': Jp. ue-; see PLANT. Austronesian and Kadai
'rice plant': Jp. (s-)ine; see RICE^{I}/. Miao-Yao
'unhulled rice': Jp. yone; see RICE/. Miao-Yao
'rice': Jp. kome; see RICE. Austronesian (Formosan)
'hulled rice': Jp. momi; see RICE/^{II}. Austronesian (Formosan)
'millet': Jp. awa; see SWAMP/. Austronesian
'mortar': Jp. usu; see MORTAR. Austronesian
'winnower': Jp. mi; see WINNOW/. Austronesian (Formosan)

Even Jp. mama 'cooked rice' is of Austro-Tai origin; see CHEW/. In addition, Jp. nae, OJ naFë 'seedling' appears to represent an old compound that combines two agricultural terminology roots: *buna 'lowlands/field (wet)/mud' (> Jp. Fena) + *pagrəy 'rice plant' (7.24). The whole complex of agricultural terms impresses as a highly integrated part of the language, as exemplified by this compound; cf. also Jp. inari 'the god of harvests', from ina- 'rice plant' (above) + -ri 'god' (see GOD/).

The lexical ties to the Formosan languages are not altogether unanticipated but are nonetheless most impressive. The surprise in this group surely is the tie to Miao-Yao revealed by one of the two principal 'rice' words (a doublet) in Japanese, which places the knowledge of this cereal at the very earliest (Proto-Austro-Tai) level in the stock. There is every reason to believe that this complex of terms had been part and parcel of the language for a long time before the arrival of the Yayoi people in Japan. We can be sure that this was an Austro-Tai-speaking population because the newly introduced wet-rice agricultural complex is 'tagged' with numerous words of Austro-Tai origin, similarly the newly introduced metallurgy. One can speculate about other aspects of the

'Japanese origins problems', but the evidence produced by these 'tags' permits only one ultimate source: the ancient Austro-Tai language/culture complex of the mainland.

Even with this ultimate source firmly located, the details as to precise early location(s), times of major movements, routes to the islands, etc. must remain highly conjectural. The linguistic evidence, on balance, has the ancestral Japanese-Ryukyuan people splitting off from the Proto-Austro-Tai-speaking 'core' along with the Proto-Austronesian-speaking people. The region involved could only have been southern or south-central China, probably near or along the coast of the South China Sea. The time of this original split can be estimated at 5,000 B.C., give or take a millennium or so. Blust (1980a) employs lexico-statistical methods to yield the same date for Proto-Austronesian itself, but there is a firm consensus among comparativists as well as prehistorians that such methods leave much to be desired. In this case, however, the Southeast Asian archeologists have also pushed their dates for the ancient 'high culture' of the region, e.g., the beginning of bronze metallurgy, back to about the same period (Benedict 1975:185), hence Gedney's first objection (above) simply does not apply in this case. In fact, as can be seen, the dates fit here in a rather precise way, apparently a point of some significance.

The evidence for an (approximate) coastal location is supplied by the fact that Japanese-Ryukyuan and Austronesian share a cognate set for SEA (*wacal), very much the 'deep sea' on the basis of the glosses (see Glossary entry). Two other Proto-Austro-Japanese cognate sets, for FISH and BAIT, are not necessarily maritime, but a third set does add some support for the coastal location: FISH/SQUID, probably basically 'food' (squid has been a highly important food source in Japan throughout its history).

From what region along the coast did the ancestral Japanese-Ryukyuan people depart for the 'opposite shore' > 'islands' (Jp. sima - see OPPOSITE SHORE/)? The conjecture - and such it must remain for the present - can be narrowed down a bit if one makes the working assumption that the Proto-Japanese-Ryukyuan speakers were north of

the Proto-Austronesian speakers at the time of the original split from the Proto-Austro-Tai 'core' and that they remained in that position. The first Austronesian hop almost certainly was across the 90 miles of water to Taiwan, home of the Formosan speakers, but perhaps only this group made the trip, the main body of Proto-Malayo-Polynesian-speakers reaching the Southeast Asian island world via the Philippines (this would nicely account for the radical Formosan/Malayo-Polynesian dichotomy). In any event, the region of departure of the Proto-Japanese-Ryukyuan-speakers can be pinpointed, in this line of reasoning, as lying somewhat to the north of the Formosa Strait, roughly in the lower Yangtze basin. This is the homeland of the present-day Wu dialects of Chinese, whose intricate patterns of tone sandhi may well reflect the pitch-accent system of a substratum population, very likely to have been Proto-Japanese-Ryukyuan-speaking (8.6).

There remains the question re the route(s) taken by the ancestral Japanese in their epic voyage(s) to the 'opposite shore' (above). As would be expected, the large southern island of Kyushu became their early base (Yayoi culture), but it is hard to imagine their arriving there without some stopovers, at least, in the Ryukyu Islands en route. It is also possible that more than one discrete, although related, group made the voyage, e.g., a special shellfish-oriented culture thrived during the Yayoi period in the Satsunan Islands just south of Kyushu (Kawahara 1983); note the Proto-Austro-Japanese/Proto-Austro-Kadai cognate sets under SHELL and SHELLFISH. We must also visualize the offshore movement as the gradual infiltration of the islands by successive waves of people arriving in relatively small numbers rather than as any large-scale invasion or the like.

As pointed out above, with emphasis on the agricultural terminology, Japanese appears to have more than its share of lexical correspondences with Formosan, suggesting that the two groups may have been in close contact for some period of time following the initial breakup of the ancestral Proto-Austro-Japanese. It is also not unlikely that contacts with one or more Proto-Malayo-Polynesian groups took place at a later period or periods. The word for 'bark cloth': Jp. tae (see

SIDE (OPPOSITE)/) is especially worthy of note here. It would seem highly unlikely that this derived form arose independently both in Japanese and Oceanic; rather, this form appears to represent a relatively late Malayo-Polynesian prototype that somehow found its way to the islands of Japan at an early enough (pre-Old Japanese) period for the complex conditioned reflex in this root (7.44) to have taken place. It is even possible that the word for 'hammer' came with it: Jp. tuti, OJ tutui, with the unanticipated retention of suffixed *-i explained (7.83) in terms of the final *-h of this Proto-Austro-Tai root for BEAT/: *tutuh. An alternative possibility, made more attractive by the presence of the above 'bark cloth' root, is that the form for 'hammer' arrived in Japan *after* the standard pre-OJ *-ui > -ï shift, and hence survived in this form down to the Old Japanese period; cf. the Malayo-Polynesian glosses (under BEAT/): '(of mulberry bark) beat (on a special anvil)' (Samoan), 'beat with a stick, beat mulberry bark for cloth' (Niue). On the other hand, however, the cognate sets for 'hemp' ~ 'bast' (under HAIR/) and 'plait' ~ 'braid' (under PLAIT) can be seen as straightforward Proto-Austro-Japanese 'culture' roots.

This work does not address itself to the problem of Japanese contacts with Korean although some of the apparent lexical correspondences with Korean appear in cognate sets in the Glossary, e.g., GOURD/ - Kor. ori, SOOT - Kor. sus, SPIT/ - Kor. kos, STITCH/ - Kor. nup. The forms so involved are for the most part isolated in Korean, without likely Altaic cognates, and in the absence of evidence to the contrary can be viewed as early loans from Japanese - if not simply 'look-alikes' in some cases. The classic case here is Jp. kuma 'bear', a word with impeccable Austro-Tai genealogy (see Glossary), Kor. kōm, from an earlier /koma/ = /kuma/, as attested by a 15th century inscription (S. R. Ramsey:p.c.). The bear has a central position in Korean mythology but this is also true of Ainu mythology and, in fact, the 'bear cult' is a regional trait, e.g., among the Formosan (Austro-Tai) peoples, as described by Ferrell (1969), the Tsou have a remote sky deity whose totem is the bear while the Paiwan word for 'bear' (tsumay < *krumay) is also glossed 'ghost, devil'. In cases of this sort, with no linguistic evidence to the

contrary and with an Austro-Tai etymology available, one must infer that the loan originated in Japanese rather than in Korean.

This study is to be looked upon as only a preliminary investigation in the field, with emphasis on the setting up of a workable phonological framework. On the basis of his earlier experience with Austro-Tai (see Benedict 1975), the writer suspects that future research will vastly increase the number of available Japanese/Austro-Tai cognate sets, including perhaps one or more of those provisionally cited in the text but excluded from the Glossary. Certain present Glossary items will undoubtedly have to be rejected in time but one can confidently look forward to an increase, probably a marked increase, over-all.

It is further to be hoped that future research will cast light on certain obscure problems that have been encountered, e.g., both the writer (1975:185–6) and Blust (1976b), the latter only in terms of Austronesian, have independently called attention to the comparative linguistic evidence for a root (or roots) for 'iron' at a far earlier (Proto-Austro-Tai/Proto-Austro-Kadai ~ Proto-Austronesian) levels than the known archeological findings can justify: the Malayo-Polynesian forms point to a *bari shape, the Formosan to a *(m)baliq ~ *(m)balic shape, the latter with the additional glosses of '(iron object =) bullet, nail', while on the mainland the apparently related Kadai and Miao-Yao forms for 'iron' appear to reflect an underlying *(q-)mbalic (> *qlic) or the like (see Benedict 1975:320). Japanese has what appears to be a significant cognate here: Fari 'needle' via 'iron object', as in Formosan, with perfect phonological fit for both the Malayo-Polynesian *bari and Formosan *(m)baliq ~ *(m)balic shapes. Can iron really have been known and worked at the very early dates suggested by these correspondences? Perhaps linguists and prehistorians of the future, working conjointly, will come up with answers to this problem and to the many others that are gradually emerging in this new field of research.

GLOSSARY

ABOVE/UP/NORTH P-Austro-Kadai *ki(n)da

P-Kadai- *kV$_p$na^A < *k*nda: P-Tai *hn*ɨa^A: P-Southern/Central Tai 'above' (F-K. Li 1977:115); also (Ahom, Shan, Nung) 'up'; also (Khamti, Siamese) 'upstream'; also (Shan, Siamese, Lao) '(upstream =) north'; Northern Tai (Buyi) '(upstream =) river'. P-Kam-Sui *ʔnya^A 'river': Sui ʔnya ~ ʔniə ~ nya, Kam ńa^H; Mak nii^H; T'en nyaa^H. Lakkia tsiẽ^A 'river', from *knie^A < *knia^A.

Jp. kita, OJ kyita = kita 'north'.

NOTE: For the preemptive Lakkia reflex see Haudricourt 1967; cf. Lakkia tsa^A 'thick', P-Tai *hna^A; Lakkia tsak 'heavy', P-Tai *ʔnak (both with loss of nasalization); for Lakkia ts- < *k-, cf. Lakkia tsen^A 'eat' < *kan (under EAT/).

ACCOMPANY/FRIEND P-Austro-Japanese *[t,C]əma[n,l]

P-Malayo-Polynesian *təman 'accustomed', also (Malay) 'comrade'; Malay toman-a 'accompany'.

Jp. tomo, OJ tömö 'friend, companion' (with destressing).

Jp. tomo-na-i 'accompany' (-na-i is verbal supplement).

ANCESTORS/GODS P-Austro-Kadai *ʔamu

P-Austronesian *ʔamu: Fijian: Nadrau kamu (< *k-amu) 'father (voc.)' (Capell and Lester 1945–6). P-Tsouic *tamuʔu (< *t-amu) 'grandparents': Kanakanabu támu, Saaroa tamoʔo, Puyuma təmu(w)an ~ təmuam(w)an 'grandparent/ancestor; grandchild' (Rikavong təmu 'grandparent', təmuwan 'grandchild'); P-Rukai *(t-)omo < *(t-)umu < *(t-)amu 'grandfather'.

Proto-Kadai- *C$_{ts}$V$_i$mua(n)^A < *-mu-a(n): P-Southern Tai- *hmua: Lao mua^H 'grandparent (mother's father)'; also P-Southern- *hmoon^A < *hmuan^A: Khamti, Shan moon^H 'ancestor of the fourth generation'.

Jp. kami, OJ kamï ~ (compound) kamu- '(the ancestors =) the gods; (the voice of the gods =) thunder', from *k-amu-i with prefixed *k- for 'deceased persons' (10.43).

NOTES

1. The early form is reflected in the Ainu loanword: kamúy 'god' (cited in Martin 1979).

2. Yanagita Kunio's celebrated hypothesis re the origin of /kami/ in an ancient system of ancestor worship has been supported by recent scholarship; cf. the evidence presented by scholars at the special seminar on Kami Worship (Shinto) at the 31st International Congress of Human Sciences in Asia and North Africa, Aug./Sept., 1983, Tokyo/Kyoto, especially Miyata Noboru (1983): 'Yanagita's theory of ancestral spirits can be backed up by concrete evidence from the eastern part of Japan...' As pointed out by Hirai Naofusa (1983), the most important /kami/ of the ancient period were the tutelary deities of clans, the /uzigami/ (for /uzi/, see LIVE/CLAN), the ancestral spirits par excellence; additionally, deified heroes and 'superior persons' also formed a class of /kami/, constituting further direct links with the ancestors. Cf. FATHER/SPIRIT.

3. A striking parallel to the Japanese development is furnished by P-Malayo-Polynesian *tu?a ~ *tuwa 'old [persons]', also (Fijian) 'grandfather', also *ma-tuwa 'old (Toba-Batak); older children (Malay)'; P-Polynesian *matu?a < *ma-tu?a 'parents', also (Tikopian) 'mature, elder', P-Polynesian also *atu?a < *qa-tu?a 'deity', with prefixed *qa-, as in SPIRIT/: *(qa-)liCu 'spirit, ghost' (for *qa-, see 9.21).

ANT/TERMITE P-Austro-Japanese *[q,?]alǝy

P-Austronesian *[q,?]alay: P-Malayo-Polynesian *?anay 'termite'. Pazeh (Paiwanic) ?alay 'ant'.

Jp. ari 'ant'.

ANUS See OPENING/.

ARROW See FEATHER/.

AUNT See GRANDPARENT/GRANDCHILD ~; MOTHER/.

BACK P-Austro-Kadai *[SYL][ts,s]an

P-Kadai- *[SYL]san^{A}: P-Tai *san^{A} 'back of a blade (non-cutting edge)' (F-K. Li 1977:153), also (Lao; (compound) Shan) 'the back', ((compound) White Tai) 'shoulder blade', (Lao, Dioi) 'crest (of hill, mountain)'.

Jp. se 'back; ridge', from *sai.

BACK/BEHIND P-Austro-Japanese *huzi

P-Austronesian- *[s,h]u[z]i: P-Malayo-Polynesian *huḍi 'hind-part' (Malay 'back').

Jp. usiro, OJ usirö 'back, behind', from *usi-rö.

NOTE: The Japanese final -rö element, of uncertain origin, appears in two other body part words: Jp. kokoro, OJ kökörö 'heart'; Jp. Futokoro, OJ Futukorö 'bosom'.

BAIT P-Austro-Japanese (I) *śapa

P-Austronesian *-śapa-an > *-śapan (see the reduplicated form under II); also represented by the infixed *-um- derivative (see 9.3) *ś-um-pa-an > *ś-um-pan: P-Hesperonesian *ʔumpan 'bait'. Atayal: Mayrinax (female form) s-um-pan 'feed (animals)'.

P-Austronesian *[śa]pa-ən > *paʔən 'bait' (Tsuchida 1976:270), with incorporation of suffixed *-ən (see 9.40), following canonical reduction-left in maintaining the canonical Austronesian disyllabism (see 5.1).

Jp. eba, OJ weba, a destressed form from *(u-)[y]öba (see 9.22 for the prefixed u-).

(II) *śa-śapa

P-Austronesian *śa-śapa-an > *śa-śapan (partially reduplicated, with incorporation of suffixed *-an; see 9.41): Atayal: Mayrinax (the conservative female forms cited in P. J-K. Li 1983) sa-span 'animal food' (with loss of V_1), sa-sapan-an 'trough' (reanalyzed form, with retention of V_1).

Jp.: Shizuoka dial. yosa (Martin 1979 cit.), a destressed form from *yösa < *śəśa[pa].

Jp. esa, OJ wesa, a destressed form from *(u-)[y]ösa (see 9.22).

NOTES

1. The analysis of this complex etymon closely parallels that of EAT, which also shows Atayalic final -an < *-a-an, along with final *-aʔan elsewhere, but there the /ʔ/ can be taken as marking the morpheme boundary since there is Formosan (Ami) evidence for this element.

2. The *u- prefixed Japanese forms reflect a development of the type: *u-yöba > *wöba > weba, *u-yösa > *wösa > wesa, with /e/ the regular destressed vowel after labials (see 6.4). Shizuoka yosa represents the unprefixed (and reduplicated) root.

BAMBOO P-Austro-Japanese *batakan

P-Austronesian- *batakan: P-Atayalic *batakan, Squliq takan. Paiwanic: Bunun batakan 'large bamboo' (Ogawa and Asai 1935) and

Pazeh patakan 'bamboo' both appear to be loanwords from Atayalic. The initial /p-/ of the Pazeh form is unexplained (assimilated to /-t-/?).

Jp. take, OJ takë, from *takai.

BARK CLOTH See SIDE (OPPOSITE)/.
BASE See BOTTOM/.
BAST See HAIR/.
BATHE See WASH/.
BATTLE See REBEL/.
BEAM See BOARD/.

BEAR (n.) P-Austro-Tai *kru(m)bay

P-Austronesian- *krumay < *krumbay: P-South Formosan *Cumay (Tsuchida 1976:242); P-Atayalic *krumay: Sediq: Iboho kumai, Hogo summai.

P-Kadai- *kumay^{A} < *krumbay: P-Southern/Central Tai *hmii^{A} (F-K. Li 1977:75, 263), from *hmwii^{A} < *[ku]muy (with *a > *u assimilation); P-Southern Tai- also *hmɨay^{A}: Lao (doublet) mɨəy^{H} 'bear (large sp.)', from *[k]əmay (with destressing followed by vocalic transfer). P-Northern Tai *hmuuy^{H}: Po-ai muui^{H} (F-K. Li 1977:75, 263), from *[k]umuy (with assimilation, as in Southern/Central Tai, followed by vocalic transfer); also *hmooy^{A}: Dioi məi^{H}, from *[k]muay (through vocalic transfer); Yay mɨay^{H}, matching the Lao doublet. Kam-Sui: Sui ʔmi^{A}, Maonan moi^{A-h}, and Kam me^{A-h}; Mulao (compound) mɛ$^{A-h}$, with range of variation strikingly like that in Tai (Kam and Mulao < *ʔmɨay) and with Sui maintaining the initial stop (ʔ- < *k-). Lakkia ku:[i~]^{A} < *kmuuy, with typical preemption along with assimilation and vocalic transfer, as in Po-ai. P-Li *muy^{A}: Tong-shen, Bao-ding, Hei-tu, Jia-mao mui; White Sand, Bai-sha moi; Yuan-men mou, with development as in Northern Tai.

P-Miao-Yao *krəp = *krop (Purnell 1970:14, F-S. Wang 1979:114, 137), from *krub[ay], with typical canonical reduction-right.

Jp. kuma, from *kumai (with canonical reduction-right).

NOTE: Purnell (1970) reconstructs medial *ə only in this root and one other, both before final *-p, on the basis of Mien: Chiengrai -e- (cep 'bear', syep 'fast), both apparently conditioned by the initial; the indicated medial is *o (regularly < *u).

BEARD See HAIR/.
BEAT See HIT/.

BEAT/POUND/HAMMER P-Austro-Tai *tutuh

P-Austronesian *tutuH_1 = *tutuh 'beat' (Tsuchida 1976:133): Javanese 'hulled by pounding'; also (Samoan) '(of mulberry bark) beat (on a special anvil)', (Niue) 'beat with a stick, beat mulberry bark' (Blust 1977). Southeastern Papua: Kiriwina tutu; Paiwa, Mukawa, Wedau tutu-i; Motu tutu-a 'hammer' (v.).

P-Miao-Yao- *t[ou]^{B}: P-Miao *t[o]^{B} 'beat, hammer' (Purnell 1970:15, F-S. Wang 1979:57, 149).

Jp. tuti, OJ tutui 'mallet/hammer', from *tutu-i.

BEAT/WING/FEATHER P-Austro-Tai (I) *ka(m)pak

P-Austronesian *ka(m)pak: P-Hesperonesian *kapak 'wing; flutter', also (Ngadyu Dayak) 'beat wings'. P-Polynesian *kapakapa < *kampa[k]kampa[k] 'flap wings'. P-Paiwanic *kapkap: Paiwan (Western) kapkap 'wing' (cf. Proto-Polynesian).

P-Kadai- *[SYL]pak: P-Tai *pak 'insert, plant a stake' (F-K. Li 1977:61); also (Lao, White Tai, Nung, Dioi) 'drive in', (Tho) 'drive in with hammer blow'.

P-Miao-Yao- *mpaʔ < *mpak: Yao: Mien: Chiengrai ba?^{H} 'beat' (child language).

(II) *ka(m)pak > *pakpak

P-Austronesian *pakpak: P-Hesperonesian id. 'beat, beat wings'; also (Ngadyu Dayak) 'drive in a nail'; also (Philippine: P-Manobo, Tagalog, Bikol, Cebuano et al.) 'wing'. P-Paiwanic *pakpak: P-Rukai *pakəpakə 'id.', Puyuma pakpak 'wings, (long) wing feather'. Atayal: Squliq papak < *pakpak '(winged appendages =) ears'.

P-Kadai- *pa[k]: Gelao: Gao phau^{C-h} < *pha[k] '(beat wings =) fly'.
Jp. Fa 'feather'; (= Fane) wing'.
Jp. Fag-i 'fledge [feather an arrow]'.

NOTE: Jp. Fag-i maintains the final *-k, with secondary voicing (7.13); an alternative possibility is to regard the *-g as suffixial (9.43).

BEHIND See BACK/.

BELLY P-Austro-Japanese *ba[r]aŋ
P-Austronesian- *ba[r,ɣ]aŋ: P-Rukai *baraŋ.
Jp. Fara.

NOTE: The Proto-Austro-Japanese medial is ambiguous: *-[r,R]-, but *-r- is more likely in view of the need to differentiate from the similar RIBS: P-Austro-Japanese *baRaŋ.

BELLY See BOTTOM/.
BELOW See DOWN/.

BIND/BUNDLE P-Austro-Kadai *[t,C]a(m)ba[t,c]
P-Austronesian *[t,C]a(m)ba[t,c]: P-Hesperonesian *ta(m)bat 'bind fast'; also (Malagasy) 'bind together', (Toba Batak, Malay) 'bound fast'.
P-Kadai- *(C_{ts})amat: P-Southern/Central Tai *mat 'fasten, tie' (F-K. Li 1977:72); also (Shan, Lao, White Tai) 'bind', (Shan, Siamese, Lao, White Tai, Tho) 'bundle, sheaf (of rice), faggot (of wood)'. P-Northern Tai *hmat: Dioi mat^{H} 'tie into a bundle' (*-at < *-aat [dental final] < *-a-at through vocalic transfer).
Jp. taba 'bundle, bunch, sheaf'.

BIRD^{I} P-Austro-Tai *mamrok
P-Austronesian- *manuk: P-Hesperonesian id. (Formosan cognates lacking).
P-Kadai *(C-)mrok: P-Tai *nl/rok (F-K. Li 1977:131, 271). P-Kam-Sui *(ʔ)mlok: Kam mok; Sui, Mak, Maonan, Mulao nɔk; T'en n[open

o]k^{H}, with indicated *?- (in T'en only) probably for an optional *qa-prefix (9.21) (cf. Lakkia). Be nok. Lakkia mlok^{H} (cf. T'en). Laqua nuk; Laha: Ban Bung nok, Than-Uyên manək (the ma- is probably secondary). Gelao: Gao ntau^{C-1} < *n[ok].

P-Miao-Yao *(C-)m[r,l]ɔ?: P-Yao *nɔ? = *(h)n[open o]? (Purnell 1970:20). P-Miao *n[õ]^{C} (F-S. Wang 1979:65, 191), with typical secondary nasalization after initial nasal. Na-e hmu (with secondary h-).

Jp. -me, OJ -më < *-mai, as compounded in kamome 'seagull' (cf. kamo 'duck'); suzume 'sparrow'; sime 'a kind of sparrow'; tubame 'swallow, martin'.

BIRD^{II} P-Austro-Japanese *tari

P-Austronesian *tari-: P-Tsouic *tari- 'large bird', as compounded in Kanakanabu tariku:ka 'chicken/fowl' (Ogawa and Asai 1935), tarikúka 'id.' (form recorded in 1962–3, cited in Ferrell 1969). Tsuchida 1976 cites P-Tsouic *tarukuúkã, based in part on the somewhat later (1968–70) recording of Kanakanabu tarukúuka, which shows *i > /u/ assimilation, the latter form also appearing in P-Tsouic (Tsuchida 1976) *tarulai 'type of eagle' and *taruwaSə 'male pheasant'. For the second element, cf. Paiwan kuka and (with assimilation) Ami koko (< *kuku) 'chicken/fowl'. Note also the assimilated Paiwanic cognates: P-Rukai *tarokoko < *tarukuk[u] 'chicken/fowl', Puyuma turukuk ~ tərukuk (with destressing), Bunun tolkok < *tur[u]kuk[u] 'id.', both with double assimilation.

Jp. tori, OJ töri (with destressing, cf. Puyuma).

BIRD (OF PREY) P-Austro-Japanese *taka

P-Austronesian- *taka-: P-Paiwanic *taka-, as compounded in Paiwan takaŋa 'eagle', Saisiyat takako 'falcon' (neither -ŋa nor -ko analyzed).

Jp. taka 'hawk, falcon'.

NOTE: Perhaps Puyuma takuŋa 'type of kite' belongs here, but the -u- would remain unexplained: hardly *taku- > *taka- through assimilation in view of Saisiyat takako.

BITE See HOLD (IN HAND ~ MOUTH)/.
BLOOD See FLUID/.

BLOW/BREATH/WIND P-Austro-Tai (I) *ʔiyup

P-Austronesian *ʔiyup 'blow': P-Hesperonesian, P-Atayalic 'id.'; P-Paiwanic *ʔiyup 'blow (with breath)': Puyuma miyup, Thao myu:p, Siraya mioup, Ami miʔiof, all with *m(i)- actor-focus marker; also *ʔi[y]ip: P-Rukai *ʔipi (with *-i 'echo vowel'); Bunun maʔip, with *u > /i/ assimilation.

(II) *ʔiyupʔiyup > *piyup

P-Austronesian *piyup: P-Hesperonesian id.: Malagasy fiuk$_a$ 'whistle' (cited in Dempwolff 1938 under *ʔiyup) (for the final, cf. Malagasy allofam under III). P-Paiwanic- *pi[y]up: Siraya piop 'blow (with breath)'.

P-Kadai- *piu^C < *pi[y]u[p] (with 'Procrustean' reduction - see Benedict 1975:156–7): P-Southern Tai- *phiu^C: Shan phiu 'make a whistling sound, as wind blowing, or wind expelled through a hole in anything'.

P-Kadai- *p-riu^A < *p-r-i[y]u[p] (infixed form) 'whistle' (v.): P-Tai *phriu^A: Khamti phio; Shan, Siamese phiu; Saek phriu ~ hiu.

P-Kadai- *pwiu^B < *[ʔiy]upi[y]u[p] (with vocalic transfer): P-Li *viu^B < *bwiu (secondary voicing): Southern Li viu 'wind; flute', Tongshen viu 'wind'.

P-Miao-Yao- *pyom^B: P-Yao id. 'blow' (Purnell 1970:22), from *pyum < *pyup(pyup) (with typical stop > nasal shift in reduplication).

(III) *tiyup

P-Austronesian *tiyup: P-Hesperonesian id. 'blow': Javanese tiyup, Malay tiup 'blow'; Malagasy tsiuf-ina 'what is used for blowing', tsiuk[a breve] 'breeze' (for the final, cf. Malagasy allofam under II). P-Polynesian *tiu 'wind'. Puyuma pa-a-tiyup 'play on a bamboo flute, harmonica; to whistle' (for 'causative' *pa-, see 9.20), pa-a-tiyup-an 'bamboo flute (small), harmonica' (-an is referent-focus marker).

P-Kadai *tiu^A < *ti[y]u[p] (with 'Procrustean' loss of final, as under II): P-Tai *thiu^A 'whistle' (v.): Khamti thio, Lao, Saek thiu.

OJ ti '(compound) wind'; see FAST (BLOW)/.

(IV) *siyup

P-Austronesian *S_5əyup = *səyup (Dyen 1965) 'blow', from *siyup (with destressing); also *suyup 'id.': Cebuano (Philippine) huyup, with *i > /u/ assimilation.

P-Kadai *zup < *su[y]upsu[y]up (secondary voicing; cf. P-Miao-Yao under II), with regular loss of *-y- (Benedict 1975:163): P-Kam-Sui *zup 'blow': Mak səp^{L}, Sui fup^{L} ~ hup^{L}, Mak, Maonan zəp, T'en thep^{L}, with *i > /u/ assimilation, as in Cebuano (above).

OJ si '(compound) breath; wind'; see DOWN/, RISE/; also note Jp. ara-si 'wild/rough wind' = 'storm'.

NOTE: This is a most unusual allofamic series, with initial *?- varying with both *t- and *s-, both represented by the Jp. ti ~ si doublet. It is possible that the initial *?- allofam is secondary: *[t,s]iyup-iyup (partial reduplication), which also yields a source for the *piyup allofam, but this development would have to be posited for a very early (Proto-Austro-Tai) level and would leave the *t- ~ *s- variation unexplained.

BLOW (WITH MOUTH) P-Austro-Japanese *[ts,tš]ibuk

P-Austronesian- *ts_{12}ibuk: P-Northern Philippine *sibuk: Pangasinan sibuk, Inibaloi si?buk; also Isinai sipu?, perhaps from an allofamic *ts_{12}ipuk.

Jp. Fuk-i 'blow, breathe'.

BLUE See GREEN/.

BOAR See TUSK/.

BOARD/BEAM P-Austro-Japanese *bali[γ,R]

P-Austronesian *baNiR = *bali[γ,R] 'board' (Tsuchida 1976:140).

Jp. Fari 'beam, girder'.

BODY P-Austro-Kadai *ba(n)traŋ

P-Austronesian- *ba[t.]aŋ: P-Hesperonesian id. 'corpse'; also (Northern Philippine: Isinai) 'body'.

P-Kadai- *(C_{ts})ad[r,l]aŋ < ***antraŋ**: P-Central Tai/P-Northern Tai *ʔdl/raaŋ (F-K. Li 1977:129) (with vocalic transfer).

Jp. Fada 'body; skin'.

NOTES

1. Li's reconstruction of P-Central Tai/P-Northern Tai initial *ʔdl/r-is labeled 'tentative' in the absence of a Saek cognate (required to disambiguate from *ʔd-) but is supported here by the comparative data.

2. It is probable that a doublet: *bat[ɻ]aŋ is to be reconstructed here on the basis of Saisiyat basaŋ 'body', from P-Paiwanic *baCaŋ (see Benedict 1975:176 for *C < *tɭ).

BOIL See FOAM/.

BOIL/BUBBLE P-Austro-Japanese *luwag

P-Austronesian *[l,ɻ]uwag: P-Northern Philippine *luwag: Ibanag lu:wag, Kankanay, Gaddang luwag 'boil'; Ifugao l-um-uwag, Kalinga lu:yak 'bubble'; also Itawit ʔipa-luwag 'boil', məl-lu:-luwag 'bubble'; Pangasinan pa-lwag 'bubble'. P-Rukai *oa-aga 'boil/cook food' (*oa- is actor-focus marker, -a is 'echo vowel') (with canonical reduction-left).

P-Kadai- *luak: P-Southern/Central Tai id.: Siamese luak 'boil' (tr.), Nung luuk 'scald (with hot water)'.

Jp. wak-i 'boil, get hot'.

BONE P-Austro-Japanese *bani

P-Austronesian- *bani: Atayal C?uli? bani? (Ferrell 1969).

Jp. -bane < *-bani-a, as compounded in kabane 'corpse; skeleton', from kara 'husk/corpse' (see EMPTY/) + -bane 'bone' (Martin 1979).

Jp. Fone < *Foni-a 'bone' (the destressed form).

BORDER See SIDE/.

BORDER/EAR P-Austro-Japanese (I) *[t,C]a(m)bir

P-Austronesian- *[t,C]a(m)bir: P-Hesperonesian *ta(m)bir 'border; (something bordered =) flat vessel'; also (destress doublet) P-Minahasan (Sulawesi) *təmbir 'edge, side, bank' (Blust 1980a:54); also (with canonical reduction-left) Javanese mbir 'edge, side of'.

(II) *[t,C]a(m)bir > *(m)bir(m)bir

P-Austronesian- *birbir: P-Hesperonesian id. 'rim, edge, border' (Blust 1980a:53).

Jp. mimi, OJ myimyi = mimi 'edge/border; (border of ear-canal =) ear'.

NOTE: For the semantics, cf. Tai: Ahom phriŋ 'near', phriŋ-śup '(near = border of + mouth =) lips', Khamti piŋ-sop 'lips' (sop 'mouth'), piŋ-hu 'ear' (hu < 'ear'), Nung pik-khyu ~ pik-śu 'ear' (pik- < *piŋ- through assimilation) (see Benedict 1975:344); cf. also Burmese ʔa-na: 'near', na: 'ear'.

BORE/GIMLET P-Austro-Japanese *girik

P-Austronesian- *girik: P-Hesperonesian id. 'bore'.

Jp. kiri, OJ kyiri = kiri 'gimlet/awl'.

Ryukyuan: Shuri ʔiri, Yonaguni iri 'id.', perhaps from *giri (Martin 1979).

BORE/PIERCE/TUBE/PIPE P-Austro-Kadai (I) *tə(m)buk

P-Austronesian- *tə(m)buk: P-Malayo-Polynesian id. 'perforate'; also (Fijian) 'hole in river bed'.

P-Austronesian *tumbuk < *təmbuk (with *ə > /u/ assimilation): P-Hesperonesian id. 'thrust through'. Saisiyat (Paiwanic) tombok '(thrust through =) kill'.

P-Austronesian- *təbək < *təbuk (with *u > /ə/ assimilation): P-Hesperonesian id. 'pierce, bore through'.

P-Kadai- *ʔbuk < *[tə]buk: P-Central Tai *ʔbuk: Tho buok^{H} 'tube; (compound) pipe', Nung buk^{H} 'tube (as for chopsticks); (compound) quiver'.

P-Kadai- *C$_{t}$(o)(m)bok < *[t](o)(m)bok (with *u > /o/ assimilation): P-Tai *ʔ(m)bo(o)k 'tube, barrel [of gun]' (F-K. Li 1977:69): Lao m[open o]ɔk^{H} 'tube, gun' ~ bok^{H} 'tube of bamboo [measure]'.

(II) *tə(m)buŋ

P-Austronesian- *tubuŋ < *təbuŋ (with *ə > /u/ assimilation): Northern Philippine: Ilocano, Kankanay tu:buŋ; Pangasinan tubuŋ 'bamboo water container'.

P-Austronesian *(m)buŋ(m)buŋ < *tə(m)buŋ(m)buŋ (partial reduplication): P-Malayo-Polynesian *buŋbuŋ = *(m)buŋ(m)buŋ 'hollow, tube'; also (Tagalog, Bikol; Northern Philippine: Yogad, Kapampangan) 'bamboo water container'; Samoan pupu < *mbu[ŋ]-mbu[ŋ] 'quiver, scabbard'. Saisiyat (Paiwanic) boŋboŋ < *buŋbuŋ 'guard of a sword'.

P-Austronesian- *təbəŋ < *təbuŋ (with *u > /ə/ assimilation): P-Igorot (Philippine) *təbəŋ 'pierce'.

P-Kadai- *C$_t$(o)boŋ$^{B/C}$ < *[t](o)boŋ (with *u > /o/ assimilation): P-Tai *ʔbo(o)ng^{C} 'pierce' (F-K. Li 1977:69); also (Shan) 'hole or opening', with Siamese, Lao, and White Tai all having /o/ ~ /oo/ doublets; P-Southern Tai also *ʔboong^{B}: Shan mɔŋ^{H} 'the hole in the blade of a thing, for the insertion of a handle', Siamese bɔɔŋ^{H} 'hole, hole for the insertion of a handle; insert a handle', Lao id. 'tube', White Tai bɔŋ^{H} 'socket (of a tool)'.

Jp. toi ~ Fi, OJ toFï ~ Fï 'pipe', from *(to)Fui.

BOTTOM/BASE/BELLY P-Austro-Kadai *(m)bə(n)təŋ

P-Austronesian- *(m)bə[t,C]əŋ: P-Malayo-Polynesian *bətəŋ = *(m)bətəŋ '(bottom of body =) belly'; Fijian boto- < *mbətə[ŋ]- 'bottom'.

P-Kadai- *C$_i$odoŋ^{B} < ***ontoŋ**: P-Tai *dooŋ^{B} 'stomach' (F-K. Li 1977:105, 278, who reconstructs medial *-uɔ-); also (commonly throughout Tai) 'belly/abdomen' (with vocalic transfer); Chung-chia (Northern Tai) toŋ ka 'belly (toŋ) of the leg (ka)' = 'calf'. Be hoŋ$^{B-1}$ < *doŋ^{B} 'belly, entrails; (compound) abdomen'.

P-Kadai- *C$_i$onoŋ < ***ondoŋ** (continued nasal increment): P-Southern Tai *nooŋ^{C} 'calf (of leg)': Shan nɔŋ, Siamese n[open o]ɔŋ (cf. Chung-chia)(with vocalic transfer).

Jp. moto, OJ mötö 'base, foundation, root'.

NOTE: For the semantics, cf. German *Unterleib* '(under-body =) belly/abdomen'.

BREAK/TEAR P-Austro-Japanese *rapuq

P-Austronesian- *rapuq: P-Hesperonesian *rapu? 'break into pieces'; also (Malay) 'tear into pieces'.

Jp. yabuk-i ~ yabu-ri 'tear, break, crush'.

BREAST P-Austro-Kadai *tśitśi

P-Austronesian *$ts_{123}its_{123}i$: Bunun (Paiwanic) tsitsi (1893 source cited in Ferrell 1969).

P-Kadai *[tś]i[tś]i > *[tś]i (tone undetermined): P-Kam-Sui-*[t1ś][i]$^{A/C}$: Maonan sɛ^{A} ~ tsɛ^{C}. P-Li *tsi (tone undetermined): Southern Li cei$^{A/C}$ 'breast; milk', Northern Li cei 'milk'; White Sand ci^{B}; Bai-sha tsi^{B}; Yuan-men ti^{B}; Tong-shen, Qian-dui, Bao-cheng tsi^{C}; Bao-ding tsi^{A} ~ tsei^{A}; Xi-fang tsei^{A} 'breast'. Gelao: Gao ci^{B} ci^{A}.

Jp. titi 'breast; milk'.

BREAST See PEAK/.
BREATH See BLOW/.
BROTH See FLUID/.

BROTHER (OLDER) P-Austro-Kadai *ʔabi

P-Kadai- *bi$^{B/C}$: P-Southern/Central Tai *bii^{C} ~ P-Northern Tai *bii^{B} 'elder sibling' (F-K. Li 1977:66).

Ryukyuan: Shuri afi.

NOTE: The earlier meaning of this root appears to have been 'older brother', perhaps 'older brother (female speaking)' (10.41).

BUBBLE See BOIL/, FOAM/.
BUNDLE See BIND/.

BUSH/SHOOT P-Austro-Japanese *rabuŋ

P-Austronesian- *rəbuŋ: P-Malayo-Polynesian id. 'shoot' (with destressing).

Jp. yabu 'bush/thicket'.

CALL See SPEAK/.

CALL (ANIMAL)/CRY/WEEP P-Austro-Kadai *ŋak(ŋak)

P-Austronesian- *ŋak: P-Malayo-Polynesian id. 'raucous sound' (Blust 1980a); also (Javanese) 'honking of a goose', (Tongan) '(of a small child) bawl, cry loudly', (Maori) 'make a hoarse, harsh noise, screech, as a bird'; also (with loss of first *k): Kankanay ŋáŋak 'cry, weep (used only in tales).'.

P-Kadai- *ŋaak < *ŋakŋak: P-Southern Tai- *ŋaak: Shan ŋaak '(compound) call loudly'.

Jp. nak-i 'call (of animals, birds, insects), cry, weep'.

CALM P-Austro-Japanese (I) *[t,C]adoq

P-Austronesian- *[t,C]aduq: P-Hesperonesian *tadu?.

(II) *(n)[t,C]ə(n)doq

P-Austronesian- *[t,C]ə(n)duq: P-Hesperonesian *tə(n)du?.

Jp. nodo, OJ nödö.

Jp. nodok-a, OJ nödök-a.

CAVE See HOLE/.

CHANT See RECITE/.

CHEEK P-Austro-Japanese *pi(N)Gi

P-Austronesian *pi(N)Gi: P-Paiwanic id.: Kabalan pi:ŋi ~ piŋi, Bunun pi'iŋ (< *piŋi), Saisiyat pi?i. P-Hesperonesian *pipi < *piipii < *pi[G]ipi[G]i; also *(qa-)piŋ(piŋ) < *piŋipiŋi: Cebuano ?apiŋ; Northern Philippine: Pangasinan ?apiŋ; Ilocano, Isneg, (compound) Manabo piŋpiŋ.

Jp. Fi-, as compounded in Fige, OJ Fyigë = Figë 'cheek + 'hair' = 'beard'.

NOTE: The reconstruction of the medial and final of this root is uncertain and perhaps a doublet: *piŋpiŋ should be set up for the Hesperonesian forms, with the Japanese cognate of no help here. Possibly related here are Yami pəŋi; Tagalog, Bisol pisŋi; Botolan piŋi (< *pisŋi).

CHEW See HOLD (IN HAND ~ MOUTH)/, TASTE/.

CHEW/CHEWED (COOKED) RICE P-Austro-Tai (I) *$C_s$amaq

P-Kadai- *$C_s$amak: P-Southern Tai- *[hm,m][a,aa]k: Ahom mak 'chew the cud'. P-Kam-Sui *hmaak 'chew': Sui hmaak, Maonan maak^{H} (with vocalic transfer).

(II) *$C_s$amaq > *ma(q)maq

P-Austronesian- *mamaq: P-Malayo-Polynesian *mama? 'chew', P-Polynesian *mama 'id.'; also (Rarotongan) 'prepare (food) by chewing'.

P-Kadai- *(C_{ts})(a)mam$^{B/C}$ < *(k)(a)mam[ak] < *ma(k)mak: P-Tai *hma(a)m$^{B/C}$: Siamese kin mam^{C-h} mam^{C-h} 'eat (kin) like little children; eat dirtily, gluttonously', Lao maam^{C-h} 'chew (as rice by small children)', Dioi kɛn mam^{C-h} mam^{C-h} 'eat (kɛn) rice (like a child)', Nung mam^{B-1} '(chew on =) bite the lips' (Savina 1924), Shan mam^{B-h} ~ maam^{B-h} 'put into the mouth of a child bits of food; be in bits, small bits; chewed rice, such as is fed to an infant', Ahom mam < *[?m,m][a,aa]m 'boiled rice'.

P-Miao-Yao- *mam^{B} ~ *?am^{A} 'eat (child language)'.

Jp. mama ~ mamma 'cooked rice' (Nelson 1974: a child's word).

CHILD^{I} P-Austro-Kadai *?alak

P-Austronesian *W_2aNak = *(?u-)?alak (Tsuchida 1976:146).

P-Kadai *walak: P-Southern Tai *luuk 'child, son, daughter' (F-K. Li 1977:134, 268), from *lwak, with *w ~ *l metathesis and secondary vowel lengthening. P-Central Tai *lu(u)k (ibid.), with variable lengthening). P-Northern Tai *lɨk (ibid.), from *lyak < *[w]ələk (with destressing followed by vocalic transfer). P-Kam-Sui *laak: Kam, Mak, T'en, Maonan, Mulao laak, Sui lak, from *[w]alak (with vocalic transfer only). Be lək, with development as in Northern Tai. P-Li *hlɨak: Tongshen and (compound) Bao-cheng ɬak, Jia-mao ɬɨək, Bao-ding ɬi:k, Zhongsha lɨ:?, Hei-tu dɨ:?, Xi-fang, Bai-sha ɬɨk, Yuan-men ɬɨ?, with variable destressing > vocalic transfer (cf. Northern Tai, Be) and reflecting an original prefix, probably *q(a)-. Lati: Ban Phung ko-lu 'boy', ko-lu li-me

'girl' (Robert 1913) (li-me 'woman'), from *-la[k]. Gelao: Thü lə-, Gao lei^{C-1}, from *laa[k] (cf. Kam-Sui).

Jp. wara-wa, OJ wara-Fa (-Fa or uncertain origin).

Jp. wara-be, OJ wara-Fabye = wara-Fabe (-Fabe also of uncertain origin).

NOTE: For prefixed *ʔu- > w- in this root, see 9.22.

CHILD^{II} P-Austro-Japanese *(m)bu(n)tšu

P-Austronesian- *(m)bu(n)ts$_2$u: P-Hesperonesian *bu(ń)t′u = *(m)bu(n)t′$_2$u (Malagasy busu) 'youngest child'.

Jp. musu- 'child (of speaker)': musu-ko 'son', muso-me 'daughter'.

NOTE: Note Malay buŋso ~ boŋso. Nothofer (1975) has reconstructed the heterorganic cluster: *ŋs for Proto-Malayo-Javanic in roots showing this reflex while Blust (1982a) has posited an earlier trisyllabic origin (cf. also Benedict 1975:22), hence a reconstruction of this root as P-Austronesian *(m)buŋəts$_2$u is a possibility, while the Japanese cognate could be the product of canonical reduction-center (syncopation). Mainland cognates appear to be lacking.

CHILD See YOUNG/.

CHIN P-Austro-Japanese *dzaŋgo[t,c]

P-Austronesian- *dz$_1$aŋgu[t,c]: P-Hesperonesian *d′aŋgut = *d′$_1$aŋgut 'chin, beard'.

Jp. ago 'chin/lower jaw', from *zago.

CLAN See LIVE/.

CLAN/FELLOWSHIP P-Austro-Japanese *kaba[n,l]

P-Austronesian- *kaba[n,l]: P-Hesperonesian *kaban 'companion, fellowship'.

Jp. kaba-ne 'family (clan) name' (-ne 'name' - see NAME).

CLAP/FLAP/FLY P-Austro-Kadai *[SYL]top

P-Kadai- *[SYL]top: P-Tai *top 'slap, clap' (F-K. Li 1977:99); also (Ahom and [cp.] Shan, Lao) 'flap the wings'.

Jp. tob-i, OJ töb-i '(flap the wings =) fly; (flap the legs =) spring, jump'.

NOTE: Alternative (and less likely) reconstructions are *[SYL]təp and *[SYL]tob ~ *[SYL]təb (final *-b is rare in Austro-Tai).

CLEARING (IN WOODS) See PLAIN/.
CLOSE See HOLD TOGETHER/.

COLD/COOL P-Austro-Japanese *[ts,tš]a(m)puq

P-Austronesian- *ts_{123}əpuq: P-Hesperonesian *t'_{12}əpu? 'cool off' (with destressing).

Jp. samu- 'cold, chilly'.

COLLECT/HEAP/PILE UP P-Austro-Kadai *[SYL](n)tśum

P-Kadai *[SYL](ń)[tś]$um^{A/B}$: P-Southern Tai *$sum^{A/B}$: Shan s'um^{A} 'gather together (as wood for fire); collect in a heap', Siamese sum^{B} 'gather, assemble'; also *$zum^{A/B}$ < *$nsum^{A/B}$: Siamese sum^{B-1} '(compound) a heap of grass', Black Tai sum^{A-1} 'assemble'; also P-Southern Tai/P-Northern Tai *jum^{A}: Shan sum^{L} 'collection', Siamese $chum^{L}$ 'reunite, assemble; abound; much', Lao sum^{L} 'reunion, group', Dioi śum^{L} 'reunite, put into a heap'.

Jp. tum-i 'pile up, stack; accumulate'.

NOTE: The marked initial variation in the Tai forms points to a Proto-Kadai level **tś or the like, with optional nasal increment.

COOK/ROAST P-Austro-Japanese *talak

P-Austronesian *t_1an_2ək (OCD) ~ *tałək (J. F-K. Li 1983) = *talək 'cook'; also (Atayalic) 'boil' (with destressing in SYL-2).

Jp. yak-i 'burn, roast, bake, broil'.

CORPSE See EMPTY (UNOCCUPIED)/.

CRAB P-Austro-Japanese *ga(ŋ)ki

P-Austronesian- *gaki: P-Northern Philippine id.: Kankanay gaki.

Jp. kani, Iwati dialect ganni (Martin 1979).

Ryukyuan: Shuri geni, Shodon ganyi.

CREVICE See HOLD TOGETHER/.
CROPS See FIELD (DRY)/.

CROWDED/ABUNDANT P-Austro-Japanese *[t,C]əɣəb

P-Austronesian- *[t,C]əɣəb 'crowd'; also (Javanese) 'full', (Malay) 'over-loaded', (Toba-Batak) 'numerous'.

Jp. toyo(-no), OJ töyö- 'abundant/rich'.

CRY See CALL (ANIMAL)/.

CUT (MEAT)/SLAUGHTER P-Austro-Kadai *kəRəc

P-Austronesian *kəɣəc: P-Malayo-Polynesian *kəɣət 'cut off'. P-Paiwanic *kəɣəC: Puyuma: Tamalakaw kərə[t.] 'cut or slice meat by holding it with one hand'.

P-Kadai- *koot < *ko[ɣ]ot: P-Southern Tai- *khoot: Siamese *khoot 'scrape; (cut/scrape meat off =) bone, take off'.

Jp. koro-s-i, OJ körö-s-i 'kill/slaughter', with transitivizing -s- suffix.

NOTE: The similar Paiwan kərət' 'reap with a small knife' (cited in Blust 1980a:73 reflects a distinct Proto-Paiwanic root: *kərət, which Blust rightly compares with his reconstructed root: P-Hesperonesian *gərət 'slit an animal's throat' (*k- ~ *g- variation).

CUT (OFF, IN TWO) P-Austro-Kadai *kətatś

P-Austronesian *kə[t,C]ats$_{123}$: P-Hesperonesian *kətat' = *kətat'$_{12}$ 'cut something with a knife (Tiruray); cut (a knot, something taut) (Ibanag)' (Blust 1973).

P-Kadai *[SYL]tat: P-Tai *tat 'cut off, sever' (F-K. Li 1977:96).
Jp. tat-i 'sever, cut off, cut in two'.
Jp. tati '(the cutter off =) long sword' (nominalized form).

DAY P-Austro-Japanese *ka

P-Austronesian *ka (bound form): P-Hesperonesian- *ka: Malagasy ha- + -ana (affixed to numeral) 'a number of days' (Dahl 1976:122). Paiwan ka- + -ɬ 'frequency and duration of time (days, times, etc.)' (see Paiwan citation under TWO); Tsuchida 1976 cites P-South Formosan *ka-pitu-an 'seventh month' (pitu 'seven').

Jp. -ka ~ -uka (Martin 1979) 'day', the latter with prefixed u- (see 9.22), as compounded in ituka 'five days' (itutu 'five'), yooka < *ya-uka 'eight days' (ya 'eight'), etc.

DEEP/SEA P-Austro-Tai *(n)[t,C]u(m)biγ

P-Austronesian- *[t,C]ubiγ: P-Hesperonesian *tubiγ 'water depth'; also (Malay) 'deep place in the sea'; also (Tagalog, Cebuano, Bikol) 'water'.

P-Miao-Yao *(n)to^{A} = *(n)to(u)^{A} 'deep' (Purnell 1970:53, F-S. Wang 1979:57, 150): Yao: Yao: Haininh du^{A-h} (< *ntou^{A}) 'deep', wam^{A} tu^{A} (< *tou^{A}) 'water (wam^{A}) depth'.

Jp. umi, OJ umyi = umi 'sea', from *u-mi (see 9.22) < *-mbii.

NOTES

1. Final *-γ (>-i) rather than *-R (>[0]) is indicated for this root by the canonical reduction-left development, as typical of lengthened disyllabic roots (see 5.22).

2. For the semantics, cf. English *the deep*. The core meaning of this etymon appears to have been 'deep water' = 'sea'.

DEICTIC/SUBORD.PARTICLE P-Austro-Japanese *-Cu

P-Austronesian *ʔit$_2$u 'this' (Dahl 1976:63) = *ʔiCu 'this' ~ 'that', from *ʔi-Cu (see Note): P-Hesperonesian *ʔitu 'this', as glossed in Dempwolff 1938, based on Tagalog ʔito, Malagasy itu, but Malay ʔitu 'that, those', Bikol id. 'that (far)', Cebuano kadtu 'id.', didtu 'there (far)' (cf. Tagalog di:to 'here'), Yami ʔu'itu 'that' (Ferrell 1969), uito 'that

(near)' (Ogawa and Asai 1935). P-Paiwanic *ʔiCu: Paiwan a-i-tsu 'this', Ami ito 'id.' (Dahl 1976 citation), Favorlang icho 'he', a-icho 'there', Thao [theta]i:[theta]u 'he', from *CiCu < *[ʔ]C[u]iCu (partial reduplication).

OJ -tu 'particle marking relationship between attribute and head', already fossilized in Old Japanese; retained in the modern language in the compound: matuge '(eye-its-hair =) eyelashes'.

NOTE: See 9.23 for the personal nominative marker *ʔi-, frequently prefixed to deictics, e.g., Kam. (Northern Philippine) has ʔi-ti ~ ʔi-ni 'this', ʔi-ta ~ ʔi-yan 'that' (cited in Reid 1979).

DIE/END P-Austro-Kadai *[SYL][ts,s]in

P-Kadai- *sin^{B}: P-Southern Tai- id.: Siamese sin^{B} 'end; finished, terminated'.

Jp. sin-i 'die'.

NOTE: For the semantics, cf. DIE/END ~ KILL.

DIE/END ~ KILL P-Austro-Tai *(ma-)play ~ *pa-play

P-Austronesian *maCəy = *maCay 'die' ~ *paCəy = *paCay 'kill' (Tsuchida 1976:228, 242), with P-Austronesian 'stative' *ma- vs. 'causative' *pa- prefixes (9.20). The distinction has undergone widespread lapsing of function, especially outside Formosan; cf. P-Hesperonesian *matay ~ *patay 'die, dead'; note Toba-Batak mate 'dead', pate 'come to an end'.

P-Kadai *C$_{i}$(a)play^{A}: P-Tai *praay^{A} 'die' (F-K. Li 1977:119, 287). Li reconstructs initial *tr- but notes that Saek has initial pr- 'indicating an original P-Tai *pr- instead of *tr-' (with vocalic transfer). P-Kam-Sui *pray^{A} (without vocalic transfer): Kam, Sui, Mak, T'en, Maonan tai; Mulao: Da-yin tai, Da-wu pγai. Be dai^{A-h} < *tay. Lakkia plei^{A} < *play. Laqua tie < *tiay. Lati: Ban Phung pe (Robert 1913), Man P'ang pien, with secondary nasalization perhaps reflecting an original prefixed *m[a]-. Gelao: Thü ple u, Gao pen^{A} (cf. Lati: Man P'ang).

P-Miao-Yao *day^{C} 'die' (Purnell 1970:54), from *tay (unprefixed form); also *tay^{C} 'kill' (Purnell 1970:109), from *[pa]tay.

Jp. Fate 'end' (n.), incorporating prefixed *pa-.

Jp. Fate-ri 'end, be finished, die'.

DOG P-Austro-Tai *?a(ŋ)klu

P-Austronesian *W_1a[theta]u = *(?u-)?ats$_2$u (Tsuchida 1976:146); see 9.22 for *?u-.

P-Miao-Yao *kl[ou]^B (Purnell 1970:57, F-S. Wang 1979:113, 131).

Jp. inu, OJ winu; also (Ōno et al. 1982: 10th century) wenu, from *u-inu ~ *u-enu < *?əŋklu (destressed form), with prefixed w- < *?u- as in Austronesian.

NOTE: Purnell reconstructs P-Yao *klu^B, but final *-ou better accounts for Mien: Chiengrai klu, Mun: Haininh klo. P-Miao-Yao *-ou < P-Austro-Tai *-u) is the regular reflex.

DOOR P-Austro-Kadai *pi(n)təw

P-Austronesian *pi(n)təw: P-Hesperonesian *pintu. Thao (Paiwanic) pitaw.

P-Kadai- *[SYL]təw^A: P-Tai *tuu^A (F-K. Li 1977:99, 266). P-Kam-Sui *too^A: Kam, Sui, T'en to, Mak too, Maonan tɔ. Lakkia to^A. Li: Ha teu. Laqua tu, Laha: Noong Lay təw, Than-Uyên tu.

Jp. to, OJ two = to.

DOWN/BELOW/WEST P-Austro-Japanese *(n)[ts,tš]i(m)baw

P-Austronesian- *(n)ts$_{123}$ibaw: P-Hesperonesian *sibaw ~ (destressed doublet) *səbaw 'down' (Capell 1943); P-Polynesian *hifo < *sibaw 'downwards'; also (with partial reduplication) *sisifo < *nsinsibaw '([sun going] down =) west'.

Jp. simo(-ni), OJ simwo = simo (Martin 1979, but Ōno et al. 1982 'not clear' whether final -o or -ö) 'down, below'.

Jp. nisi 'west', OJ also 'west wind', from nsi(bo) + -si 'wind' (see BLOW/ - IV); cf. RISE/HIGH/EAST; also the (wind) directions in Hesperonesian under FAST (BLOW)/STORM.

NOTE: Japanese closely parallels Polynesian in its handling of this root, with nasal increment found only in the derived form for 'west'.

DREAM P-Austro-Tai (I) *śupi

P-Austronesian- *[ś]upi: P-Hesperonesian- *ʔupi: Maanyan (Borneo) upi (cited in Dahl 1976:48); also P-Hesperonesian *nupi < *[ʔ]-n-upi (infixed causative).

P-Miao-Yao *pwei^{C} = *pui^{C} 'sleep/lie down' (Purnell 1970:184, F-S. Wang 1979:23, 166), from *[ś]upi (vocalic transfer form).

(II) *śu(m)pi-an

P-Kadai *C_3V_w(m)pian, incorporating referent-focus marker *-an: P-Kam-Sui *pwyan^{A} < *pwian^{A} (vocalic transfer form): Kam pyan, T'en yan, Sui vyan^{A}, Maonan (compound) vyen^{H}, Mak (compound) fin. Be bien^{A} (Savina) ~ von^{A} (Hashimoto 1980), from *bwyan^{A} < *mpwian^{A}. Lakkia hwɛ:n^{A} < *phwian^{A} (aspirated by *C_s).[9]

P-Kadai *$C_s V_w$(m)pan, with loss of root-final *-i through re-analysis as the alternative referent-focus marker *-i: P-Tai *fan^{A} (F-K. Li 1977:78), from *pwan^{A} (with vocalic transfer); Saek (Northern Tai) van^{A} < *bwan^{A} < *mpwan^{A}. P-Li *phwan^{A} (vocalic transfer form, aspirated by *C_s): Hei-tu phen, Jia-mao pɔ:n, Tong-shen, Qian-dui, Bao-cheng, Bao-ding, Zhong-sha fan, Yuan-men fhan, Xi-fang, Bai-sha fan.

Jp. yume, OJ imë < *y[u]mai ~ *y[i]mai, from *ś[u]mpan, with incorporation of the referent-focus marker and loss of root-final *-i as in Kadai.

(III) *śupi > *śi(m)pi

P-Austronesian *xipi = *śi(m)pi (Dyen 1965): P-Hesperonesian *ʔi(m)pi, through early (Proto-Austro-Tai-level) *u > *i assimilation.

P-Miao-Yao *mpei^{C} = *mpi^{C} 'dream' (Purnell 1970:58, F-S. Wang 1979:29, 159).

Jp. tama-sii, OJ tama-siFi =tama 'spirit, soul, ghost' (see FATHER/ = 'the (deceased) father (t-ama) returning in a dream (-siFi)'.

NOTES

1. Alternatively, Jp. yume can be interpreted as a late, dissimilative (*yi- > yu-) form, thus coming under III.
2. See footnote 9 for the phonology underlying the Kadai doublet; also 9.41 and 9.42 for the morphology shown by this key Austro-Tai root.

DRINK P-Austro-Japanese *[q,ʔ]inom
P-Austronesian *ʔinum = *[q,ʔ]inum (Dyen and McFarland 1971).
Jp. nom-i, OJ nöm-i.

EAR See BORDER/.
EARTH See LOWLANDS/.

EARTH/FIELD (WET) P-Austro-Kadai *(m)plalaq
P-Austronesian *Calaq: P-Hesperonesian *tanaʔ ~ (destress doublet) *tanəʔ 'earth, land': Ngadyu Dayak tanah 'earth, land' ~ tana 'field'. P-Atayalic *tsəlaq '(muddy field =) mud'; also (Atayal: Cʔuliʔ, Sediq) 'wet (rice) field'.
P-Kadai- *(C_tV_i)blal^A < *(qa-)(m)plal (see 9.21 for prefixed *qa-): P-Tai *ʔblal^A: Siamese, Lao, Ahom, Black Tai, White Tai, Tho din^H; Shan lin^A; Khamti nin^H; Buyi (compound) dan^H; Dioi dən^H; Saek ɓal^H. P-Kam-Sui- *ʔbraan^A: Mulao mɣa:n^H (with vocalic transfer). P-Li *blan^A: Mefuli baŋ; Bao-ding van; Xi-fang ɣaŋ; Tong-shen, Qian-dui, Bao-cheng, Yuan-men fan; White Sand, Bai-sha faŋ; Zhong-sha ran; Hei-tu ren; Central Li dan ~ den; Jia-mao ki-len, from *mplan (unprefixed form with nasal increment).
Jp. 田 ta 'ricefield, paddy'.

EAST See RISE/.
EAT See SEIZE (WITH HANDS ~ TEETH)/.

EAT/FEED/MEAL P-Austro-Tai (I) *kaʔ
P-Austronesian *k_1aʔən = *kaʔ-ən 'eat' (Tsuchida 1976:174), with incorporation of the goal-focus marker *-ən (see Note).
P-Austronesian *kaʔ-an 'eat': P-Atayalic *kan, with incorporation of the referent-focus marker *-an (cf. the Li nominalized *-an form below); cf. also the re-analyzed P-Austronesian *kanan < *ka-n-an 'dish, plate' (Blust 1980a:83).
P-Kadai- *ka(a)n^A < *kaʔ-an: P-Li *kha(a)n^A: Northern Li kha:n; Shaved Head Loi: Lia-mui, Qian-dui, Bao-cheng khan 'eat'; Tong-shen,

Bao-ding khan 'feed for pigs' (note this nominalized form incorporating *-an; cf. Atayalic, above). Lati kho < *kha 'eat; drink'.

(II) *ma-ka?

P-Austronesian *ma-ka[?]-ən: P-Hesperonesian *makan: Malay makan 'eat', Toba-Batak id. 'eat (of animals)', with 'stative' *ma- prefix (9.20). These forms are cited in Dempwolff 1938 under P-Hesperonesian *pakan 'fodder'. Also (Ngadyu Dayak, Fijian) 'feed animals', which incorporates the associated 'causative' *pa- prefix (9.20).

P-Kadai *[SYL]ka < *[ma-]ka: Gelao ka, Thü kə 'eat'.

P-Kadai- *[SYL]ka[?]ən^{A} < [ma-]ka[?]-ən 'eat': P-Southern/Central Tai *kin^{A} (F-K. Li 1977:187); also (Siamese, White Tai, Shan) 'drink'; also P-Southern Tai- *?in^{A} 'eat' (Shan doublet), apparently from *ki?in^{A}. P-Northern Tai *kɨn^{A} (F-K. Li 1977:187, 190) < *kəən (with *a > *ə assimilation). P-Kam-Sui *tsaan^{A}: Kam t'a:n ~ t'i; Sui tsyan ~ tsye, tšen ~ tše, tsiə; Mak siin; T'en tsin; Mulao tsa:n, from *kaan^{A} (with *ə > *a assimilation). Be kon^{A} < *kan^{A}. Lakkia tsen^{A} < *ken^{A} < *kan^{A}. Laqua kɨən (cf. Northern Tai).

Jp. maka-na-i, OJ maka-naF-i '(feed =) provide with food, cater, board' (-naF-i is a verbal supplement), from *ma-ka-, with incorporation of the *ma- prefix.

(III) *ka?-i

P-Austronesian *ka[?]-i: P-Polynesian *kai 'food; eat' (see 9.42 for the suffixed *-i, probably related to the referent-focus marker *-i).

P-Miao-Yao- *kay^{B} 'a meal': P-Miao id.: Eastern Miao *ka^{B} (Purnell 1970:126); Northern Mao *kay 'cooked rice', on the basis of the 'Yao' [actually Miao] kai 'id.' recorded in Northwest Hunan, China, in the 18th century *Miao fan bei lan* (Lombard-Salmon 1972). For the phonology, cf. 'Yao' tai 'die' < P-Miao-Yao *day^{C}.

Jp. ke, OJ kë 'a meal; (meal in container =) food box', from *kai. For the semantics, cf. P-Austronesian *kanan 'dish, plate', cited above (under I).

NOTE: Dempwolff (1938) reconstructed for Proto-Malayo-Polynesian along the lines followed above: *ka 'essen', *ka-ən 'das was zu essen ist',

*ka-i 'etwas essen', but a Proto-Austronesian disyllabic root is reconstructed by Dyen/Tsuchida: *ka?ən (the medial on the basis of the /?/ reflex in Tagalog and Ami) as well as by Dahl: *kaən (Dahl 1976:71). This reconstruction creates problems even within Austronesian, however, e.g., the Proto-Atayalic and Proto-Polynesian derivatives, and the /?/ is perhaps a morpheme-boundary marker. The extra-Austronesian evidence surely argues strongly in favor of the reconstruction of an Austro-Tai monosyllabic root *ka?, with final *-? also suggested by the Kadai cognates, which has undergone canonical lengthening (5.3), with widespread incorporation of suffixed elements in Austronesian.

EJECT See SQUIRT/.

EMPTY (UNOCCUPIED)/SLOUGH/CORPSE P-Austro-Kadai *ga[r,R]ap

P-Kadai- *graap < *garap (with vocalic transfer): P-Southern Tai *graap: Siamese khraap^{L} 'old skin of snakes, scorpions, etc.', Lao khaap^{L} 'corpse; (compound) slough of a snake', Shan id. 'a skin which has been shed, as a snake's; anything left unoccupied, as a dead body'.

Jp. kara 'empty, vacant; (something left vacant/unoccupied =) husk, hull, shell; cast-off skin; corpse'.

Jp. karappo 'empty, vacant', with suffixed *-po (9.44).

END See DIE/, DIE/END ~ KILL.
ENEMY See OUTSIDER/.
ERROR See FAULT/.
EVENING See NIGHT/.

EXCHANGE/SELL P-Austro-Japanese *[q,?]u[r,R]up

P-Austronesian *[q,?]u[r,γ]up: P-Hesperonesian *?u[r]up = ?u[r,γ]up 'exchange goods'.

Jp. ur-i 'sell', from *urï < *urui < *uru-i, with loss of final after *-u-u (7.14).

EXPLORE See WIDE OPEN/.

EYE P-Austro-Tai *mapra

P-Austronesian *maCa (Tsuchida 1976:210).

P-Kadai *mV$_i$pra^A: P-Tai *praa^A (F-K. Li 1977:275). Li reconstructs initial *tr- but notes that Saek has initial pr- 'indicating an original *pr- instead of *tr-. P-Kam-Sui *?braa^A (Benedict 1983): Kam taa; Sui, Mak, Maonan daa^H; T'en ?daa; Mulao: Da-yin la, Da-wu mɣa^H, Zie-cun ba^H, from *?mpraa^A, with *?- < prefixed *q[a]- (9.21) (cf. Laha: TU). Be da^{A-h} < *ta^A. Lakkia pla^A. P-Li *[pr]a^A: Southern Li sa ~ śa; White Sand cha; Bao-ding, Zhong-sha, Hei-tu, Xi-fang, Bai-sha, Yuan-men, Qian-dui tsha; Tong-shen, CB tshu^B tsha^A; Bupäli dou = tou; Jia-mao ki-tou (for prefixed k-, cf. Kam-Sui). Laqua te < *ta. Laha: Noong Lay ta, Than-Uyên kəta (for prefixed *k-, cf. Kam-Sui). Lati mcu < *mca. Gelao tau (Clarke 1911), Gao (compound) tsu^A < *ta.

P-Miao-Yao *mwəi^C ~ m[]^C (Purnell 1970:94, F-S. Wang 1979:28, 139) = *may^C, with typical secondary nasalization in Miao after initial *m-. Yao regularly shifts medial *-a- to -wə- ~ -u- after initial *m-before final dental (*-t, *-n) or palatal (*-y).

Jp. me, OJ më ~ (compound) ma-, from *mai.

EYEBROW See HAIR/.
FAINT See WEAK/.

FALL P-Austro-Kadai *ho$_l$oɣ

P-Austronesian *[s,h]u$_l$uɣ: P-Malayo-Polynesian *huluɣ 'let fall slowly'; also (Bikol, Cebuano) 'fall'.

P-Kadai- C$_{ts}$olon^C: P-Southern Tai/P-Northern Tai *hlon^C 'fall (leaves, flowers, etc.)'.

Jp. or-i 'fall, descend', oro-s-i, OJ örö-s-i 'let fall', from a verb stem *oroi.

FANG See TOOTH/.

FAST (BLOW)/STORM P-Austro-Japanese *(m)baɣat

P-Austronesian *-baɣat (Tsuchida 1976:296): P-Hesperonesian *baɣat 'northwest monsoon'. P-Malayo-Polynesian *ha-baɣat 'id.'; also (Tagalog) 'west', (Malagasy) 'north'; P-Polynesian *afaa 'storm, hurricane'; also (Tuamotuan) 'break forth violently (as a storm)'. P-Paiwanic *baɣat: Kabalan balźat 'east wind' (Moriguchi 1983); Saaroa (Tsouic) baratə 'wind', from *mbaɣat.

Jp. haya- 'fast, rapid'.

OJ haya-ti '(fast-blowing wind =) storm'. For -ti 'wind', see BLOW/-III.

FATHER See HEAD (OF LINEAGE)/.

FATHER/SPIRIT P-Austro-Japanese *t-ama

P-Austronesian *(t-)ama 'father' (Blust 1980).

Jp. tama < *t-ama ('(deceased father =) spirit, soul, ghost'. For prefixed *t-, see 10.43.

Jp. tama-sii, OJ tama-siFi = tama = 'the (deceased) father (*tama*) returning in a dream (*-siFi*)'; see DREAM.

NOTE: For the semantics, cf. ANCESTORS/ANCESTRAL SPIRITS/GODS. Miyata Noboru (1983) discusses at some length the distinction, if any, between /kami/ and /tama/, at one point (p. 1) calling the two terms 'synonymous', then finally (p. 2) concluding:

> However, even though there may be some degree of phenomenological and functional difference between the two, it is probably not possible to go so far as to flatly assert that they are separate beings.

With some guidance from the etymologies of the two terms, however, it appears that the departed 'fathers' are the 'recent dead', still hovering about as the 'spirits of the dead' = 'ghosts' (tama), whereas the departed 'ancestors', the great-grandparents and such, are the 'long dead', venerated as 'gods' (kami).

FAULT/ERROR *P-Austro-Japanese *(ň)tšaḷaq

P-Austronesian *(n)ts$_2$aḷaq: P-Paiwanic- *ts$_{12}$aḷaq: Paiwan talaq '(err morally =) do in envy or from spite; (Western) spite'. P-Malayo-Polynesian *t'aḷaʔ = *(n)t'$_2$alaʔ 'error; err' (Malagasy salasala ~ nala); P-Eastern Oceanic *(n)sala 'err': P-Polynesian *sala 'err, error'; also (Easter Island, Tuamotuan) 'sin'.

Jp. ara 'fault, defect', from *zara.

FEATHER See BEAT/.

FEATHER/ARROW P-Austro-Japanese *ḷawi

P-Austronesian *ḷawi: P-Malayo-Polynesian *lawi 'tail feather': P-Polynesian *lawe 'feathers'. P-Paiwanic *ḷawil < *ḷawiḷ[awi] (partial reduplication) 'feathered shaft =) arrow': P-Rukai *ḷavili (with -i 'echo vowel'), Pazeh rawil (1874 source cited in Ferrell 1969).

Jp. ya 'arrow'.

FEED See EAT/.

FELLOWSHIP See CLAN/.

FEMALE/WOMAN P-Austro-Tai *(I) *ba(m)bəhi > *ba(m)bahi

P-Austronesian *babahi: P-Philippine *baba:[h]i ~ *baba:[ʔ]i 'woman, female'. P-Paiwanic *babahi: P-Rukai *a-ba-bay 'woman', Ami vavahiʔ ~ fafahi 'wife'.

P-Austronesian- *babahi-an: P-Paiwanic id. 'woman': Paiwan vavayan, Puyuma babayan ~ vavayan, Ami fafahiʔan; cf. suffixed *-a under III).

P-Kadai- *(-)maay^{B} < ****(-)ambay (with vocalic transfer)*** < *(-)**amba**[h]i: P-Northern Tai *m[a,aa]y^{B}: Dioi mai 'prefix for younger girls or young woman'. P-Kam-Sui *(ʔ)maay^{B}: Kam, Mulao ma:i 'wife'; Mak ma:i^{H} 'female acquaintance/friend'. P-Li *[SYL]maay^{B}: Jia-mao ma:i^{C}; Bupäli mai = ma:i 'mother'; White Sand pa:i^{B} '(compound) woman'; Zhong-sha, Bai-sha pai^{B} 'id.'; Qian-dui phai^{B} 'id.'; Yuan-men, Bao-cheng pai^{A} 'id.'; Bao-ding pai^{B} 'mother; (compound) woman'.

(II) *ba(m)bəhi > *(m)bəhi

P-Austronesian *bəhi 'female' (Dyen 1975).

P-Austronesian- *mbəhimbəhi: Javanese bibi 'aunt' (Dyen 1975).

P-Kadai- *bi$^{A/C}$ < *bə[h]i: Lakkia pei^{C-1} < *bei 'aunt (mother's sister)'. P-Li *bei^{A}: Bao-ding, Zhong-sha, Xi-fang, Bai-sha, Yuan-men, Tong-shen, Bao-cheng pei^{L}; Qian-dui phei^{L} 'aunt (mother's brother's wife/mother's younger sister); sister-in-law (younger brother's wife)'.

P-Kadai *mi^{B} < *mbi < *mbə[h]i: P-Li *mei^{B}: Southern Li mei^{B} 'female; (compound) woman, wife'; Hei-tu id. 'mother; (compound) woman; hen'; Zhong-sha, Yuan-men id. 'mother; (compound) hen'. Laqua kə-mei '(compound) girl'. Gelao: Thü mi '(compound) wife; younger sister'.

Jp. -mi, as compounded in Iza-na-mi 'Creatress' (see ONE).

(III) *mbəhi-a

P-Kadai *mia^{A} < *mbiya (with -y- glide for morpheme-juncture) < *mbə[h]i-a: P-Southern/Central Tai *mia^{A} 'wife' (F-K. Li 1977:72); also (Ahom) 'female; female suffix used with human beings and the like'. Laqua mə < *m[ia] '(compound) wife'. Lati: BP mia (Bonifacy 1906) ~ me (Robert 1913), Man P'ang me '(compound) woman; older sister, girl'. Gelao: Aro mia 'mother; (compound) daughter' (Beauclair 1946); Thü mie '(compound) woman'.

P-Kadai *mee$^{A/C}$ < *mbia (without -y- glide): P-Tai *mee^{C} 'mother' (F-K. Li 1977:72, 273); also (Black Tai, White Tai) 'female'. P-Li *mee^{A}: White Sand me, Bas. mei 'mother'; White Sand Loi mɛ 'mother; (compound) hen'.

Jp. me, OJ mye = me 'female', OJ also 'concubine', from *mia.

(IV) *ba(m)bahi > *(m)bahi

P-Austronesian *bahi = *(m)bahi (Blust 1982): P-Hesperonesian *bayi = *(m)bayi 'mother': Tagalog bayi 'id.', Javanese id. 'suckling'= 'infant/child' (the reciprocal term). P-Rukai *abay 'woman'.

P-Kadai *may^{B} < *mba[h]i: P-Kam-Sui *may^{B}: Kam, Mulao mai '(compound) hen'. P-Li *may^{B}: Bupäli mai 'mother', Bao-ding pai 'mother; (cp. hen'. Laqua məi < *mai 'woman, mother; (compound)

younger sister'. Lati mɛ < *mai '(compound) wife'. Gelao: Gao m[inverted a]^{C} < *ma[ay] '(compound) mother; wife; girl; hen'.

(V) *b-n-əhi

P-Austronesian- *b-n-ə[h]i: Malay bini 'wife'.

P-Kadai- *ni^{B} < *[b-]nɛ[h]i: P-Kam-Sui *nii^{B}: Sui, Maonan nii 'mother; (compound) hen', T'en nei 'mother'. Be ni$_{b}^{B}_{c}$ '(compound) niece'.

P-Kadai *nia^{B} < *ni-a (cf. III): Be nie$_{b}^{B}_{c}$ 'mother's mother/woman's mother'

P-Miao-Yao * ei^{B}: P-Yao *ńei^{B} 'female [animal] who has borne [young]' (Purnell 1970:72); also (Mien) 'female (of the sex of a new-born baby); (slang) woman', (Mien, Mun) '(compound) hen', from * ei^{B} (palatalized before the front vowel).

(VI) *bab-n-ahi

P-Austronesian- *bab-n=a[h]i: P-Malayo-Polynesian *bab-n-ay 'female' (Blust 1982): Sangir babine, Motu bahine; P-Polynesian *fafine 'id.' (> Hawaiian *wahine*).

(VII) *bab-n-ahi > *(m)b-n-ahi

P-Austronesian *b-n-ahi 'female' (Blust 1982): P-Hesperonesian *binay 'woman', P-Philippine *fine 'female'. Favorlang (Paiwanic) nai 'mother', from *[b-]na[h]i, with canonical reduction-left, closely paralleling the Kadai forms.

P-Kadai- *na(a)y^{A} < *[b-]na[h]i: P-Southern Tai *na(a)y^{A} 'mother's mother' (F-K. Li 1977:180), with secondary lengthening in Lao and Black Tai; also (Shan, Lao, White Tai) 'wife's mother' (through teknonymy); also (Ahom) '(compound) aunt (father's sister)'.

Jp. onna, OJ womuna < womyina = womina 'woman, female'; the prefixed wo- apparently for 'little' (Martin 1979), from *mbina < *mbinai (with canonical reduction-right).

NOTE: The Austronesian representative of this complex system have been analyzed at length both by Dyen and Blust, the latter devoting a whole article (1982b) to the subject. Blust, who does not accept Dyen's reconstruction of P-Austronesian final *-əy (or *-əhi in this root, on the basis of the Formosan reflexes), employs the root as the showpiece of his presentation. Both linguists regard the initial *ba- of sets (I) and (VI) as

representing a partial reduplication of the root, with Blust making the point that the /a/ of this syllable is readily explained if one sets up the root as *ba-bahi rather than *ba-bəhi. There is evidence for the *-əhi ~ *-ahi doublet in Austronesian as well as in Kadai and Japanese, as shown above, hence some underlying development must be sought. The indicated solution, as reflected in the reconstructed sets above, is to regard the *ba- as the initial syllable of a trisyllabic root, with typical canonical reduction-left throughout Austronesian, along with *ə > *a assimilation. Even if one goes along with Blust in deriving all Austronesian forms from *(ba-)habi ~ *(ba-)b-n-ahi, an earlier P-Austro-Tai *(-)bəhi would still be required to handle the Kadai and Japanese derivatives, while the recognition of widespread assimilation in the root readily explains the doublet. Thus Dyen appears to be right about the final *-əhi, at least at some pre-Austronesian level.

FIELD (DRY)/CROPS/TUBER (EDIBLE) P-Austro-Japanese (I) *qumah

P-Austronesian *$q_2$umaH$_1$ = *qumah 'farm' (Tsuchida 1976:133); also (Formosan) 'field (swidden, dry)' (Ferrell 1969). P-Malayo-Polynesian *huma = *ʔuma 'cultivated land': Malay huma 'id.', p$_e$r-huma-n 'cultivated land; the crops raised'. P-Oceanic *ʔuma 'garden; to work, plant, clear ground'. Also Ami (Paiwanic) maʔuman '(work the land =) work', Atayal: Squliq məqomah 'cultivate, farm' (Ogawa and Asai 1935) ~ qumah 'work in fields' (Egerod 1980); also Paiwan quma 'cultivated land', q-in-uma-n 'crops'.

(II) *qumahqumah

P-Austronesian- *qumahqumah: P-Paiwanic id.: Rukai: Tanan, Budai omaoma; Saisiyat ʔöm?ömäh 'field (dry, swidden)'; Pazeh ʔumamáh 'field (wet, rice)'. P-Tsouic *ʔumaʔuma: Kanakanabu ʔúuma; Saaroa umuuma (< *umauma) 'farm' (Tsuchida 1976) ~ 'field (dry, swidden)' (Ferrell 1969), Tsou momo 'work in the field', Atayalic: Mayrinax qumaqumah 'dry field'.

Jp. imo, OJ umo (Martin 1979: imwo/umwo) '(crops =) edible tuber, taro', from *umau < *umau[ma].

NOTE: This etymon is connected with the earliest, pre-rice level of Austro-Tai agriculture, centered about the clearing of dry fields and the cultivation of edible tubers. It appears that a derivative *kumah root, with infixed *-l̤-, yielded both P-Polynesian *kumala 'sweet potato' and the generic Kadai root for 'edible tubers' (P-Tai *man^{A}); see Benedict 1975:261–2; cf. the strikingly parallel semantic development under SWAMP/, with an *-al- infix paralleling the *-al̤-of 'sweet potato'.

FIELD (WET) See EARTH/, LOWLANDS/, SWAMP/.

FILL/HEAP P-Austro-Japanese *(m)pəl̤(m)pəl̤

P-Austronesian- *pəl̤pəl̤: P-Hesperonesian *pəlpəl 'fill' (Tagalog 'heap').

Jp. mor-i 'fill (bowl) with food, heap up (sand)'.

Jp. moromoro, OJ mörömörö 'all, many, various' (Miller [1967] cites the Old Japanese form from an 8th century stone inscription: Bussokuseki), from mörmör, apparently with epenthetic /ö/.

FIRE P-Austro-Kadai *śa(m)puy

P-Austronesian *x$_{1}$apuy = *śapuy (Dyen 1965).

P-Kadai *C$_{s}$a(m)puy^{A}: P-Southern/Central Tai *vay^{A} (F-K. Li 1977:79, 286), from *bway < *mpway (with vocalic transfer): P-Northern Tai *vii^{A} (ibid.), from *bwi (without vocalic transfer). P-Kam-Sui *puy^{A}: Kam pui, Sui vui^{H} ~ vi^{H} ~ wi^{H}, T'en wii^{H}, Mulao fi. Be vəi^{A} < *bwi < *mpwi (cf. Tai). Lakkia pu:i^{A}. P-Li *p(h)wei^{A} < *pwi: Southern Li, Hei-tu pei; Jia-mao pai; Bao-ding, Zhong-sha, Xi-fang, Bai-sha, Tong-shen, Qian-dui, Bao-cheng fei; Yuan-men fhei, with variable aspiration from *C$_{s}$ (cf. Gelao). Laqua pəi, Pupeo id., Laha: Tu pöi, Ban Bung pi. Lati: Ban Phung pe (Robert 1913) ~ pie (Bonifacy 1906), Man P'ang pu, from *p[ui]. Gelao pai (Clarke 1911); Gao, Hagei pai^{A}; Duoluo pi^{A}; Aro va (< *vai) (Beauclair 1948); Thü phi, all pointing to variable voicing (cf. Tai, Be) as well as aspiration (< *C$_{s}$-), along with variable vocalic transfer (cf. Proto-Southern/Central Tai vs. Proto-Northern Tai) in the Proto-Gelao root.

Jp. Fi, OJ Fï < *Fui; OJ: Eastern dialect Fu < *Fu-i.

FISH P-Austro-Japanese *[q,ʔ]iwak

P-Austronesian- *[q,ʔ]iwak: P-Malayo-Polynesian *ʔiwak.

Jp. uo, OJ uwo < iwo (development cited in Martin 1979) (with destressing).

NOTE: It is highly likely that the basic etymon here is Proto-Austro-Kadai *(m)ba(ŋ)ʔiwak, with destressing in the 'weak' final syllable of a trisyllabic root (6.4); cf. P-Malayo-Polynesian *ma-ŋ-iwak 'shark' (Capell 1943), from *mbaŋiwak; also Southeastern Papua *pa + iwak 'id.', from *baʔiwak (the *ma- and *pa- of Capell's analysis are meaningless). The full root (nasal increment variety) is represented in Kadai: P-Tai *ŋɨak 'mythological sea monster, dragon' (F-K. Li 1977:35,282); also the earlier meanings: (Khamti) 'alligator', (Shan) 'alligator, crocodile', (White Tai) 'species of freshwater shark (fish without scales, living in the depths of important rivers, attaining a length of several meters)', from *[ba]ŋi[w]ak. This analysis yields an interesting 'split allofam' in Japanese: wani 'crocodile', OJ 'ancient name for the shark family'; also wanizame 'shark' (-zame < same 'id.'), from *baŋi[wak] (with *b > /w/ assimilation).

FISH/SQUID P-Austro-Japanese *śikan

P-Austronesian *śikan 'fish': P-Malayo-Polynesian *ʔikan. P-Paiwanic *sikan: Bunun ʔiś(i)kan.

Jp. ika 'squid', from *yika .

NOTE: This root incorporates the instrument-focus marker *śi- (see Note 8) and the referent-focus marker *-an: *śi-ka[ʔ]-an 'something eaten' = 'food', from P-Austro-Tai *kaʔ 'eat'. Squid, like fish, have long been a staple food source for the Japanese, hence the semantic equation here is not surprising; cf. the Northern Philippine words for 'fish', showing in this one relatively limited area widespread replacement of *ʔikan by no fewer than eight different roots, three of which simply involve extensions of roots for 'food'!

FIVE See HAND/.

FLAT P-Austro-Japanese *(n)daRa[t,c]

P-Austronesian- *daγa[t,c]: P-Hesperonesian *daγat.

Jp. nara-s-i 'level off, flatten', with transitivizing *-s- suffix.

FLAT See SPREAD/.

FLEA P-Austro-Japanese *(n)[t,C]ombi

P-Austronesian- *[t,C]umbi: Bunun (Paiwanic) tumbi ~ tumbe.

Jp. nomi.

FLESH P-Austro-Japanese (I) *śətši

P-Austronesian *x_1ə[theta]i = *śəts$_2$i 'content' (Tsuchida 1976:130, 251) but primary meaning maintained in the Paiwanic cognates: Paiwan səti, Ami hətsi 'flesh/meat'; also in Hesperonesian cognates: Ivatan (Northern Philippine) ʔasi, Ngadyu Dayak ʔisi (with assimilation) 'flesh', as well as by the reduplicated forms under (II).

(II) *śətši > tšitši

P-Austronesian *śəts$_2$its$_2$i ~ ts$_2$its$_2$i 'flesh/meat': Yami ʔasisi, Bunun titi, P-Atayalic *hiiʔ = hiʔ[h]iʔ: Mayrinax hihihihiʔ (re-reduplicated).

Jp. sisi 'flesh/meat', also 'animal'; cf. Jp. inosisi < *[w]i-no-sisi 'wild boar'; see TUSK/ for *(w)i-.

FLOWER P-Austro-Kadai *baŋal

P-Austronesian- *[b,w]aŋal: Paiwan (Paiwanic) vaŋal 'fruit'; also six dialects (see Ogawa and Asai) 'flower'.

P-Kadai- *baal < *ba[ŋ]al: Laha: Than-Uyên baal (see Benedict 1975:169).

Jp. Fana.

NOTE: It is possible that Jp. Fana 'nose' (with different accent) also belongs here; see FRUIT/ - Note.

FLUID/SAP/BROTH/GRAVY/BLOOD P-Austro-Japanese *džuγ-uq

P-Austronesian *dz_2uγuq: P-Malayo-Polynesian *duγu? 'fluid'; also (Javanese) 'sap', (Malagasy) 'broth', (Toongan) 'gravy' ~ *d'uγu? 'fluid'; also (Fijian) 'broth', (Fijian, Tongan, Samoan) 'wet', (Tagalog) 'blood', P-Philippine *d[u breve]γuq 'blood', P-Eastern Oceanic *suγu? 'fluid, liquid'.

Jp. tuyu 'juice, sap, soup, broth, gravy', also 'dew', also '(wet =) rainy season'.

Jp. ti 'blood', from *tï < *tui.

FLY See CLAP/.

FOAM/BUBBLE/BOIL P-Austro-Tai *(m)pujaq

P-Austronesian- *pucaq < *pujak (unvoicing through assimilation to initial): P-South Formosan *puCaq_1 'bubble, foam' (Tsuchida 1976:165): Paiwan (Western) putsaq 'foam'.

P-Austronesian- *bucaq < *mpucaq < *mpujak: Paiwan butsaq 'foam, lather, suds'.

P-Austronesian- *bujaq < *mpujaq: P-Hesperonesian *buja? 'foam'.

P-Kadai- *[SYL]puak < *[prefix]pu[j]ak (regular loss of voiced medial): P-Southern Tai-*puak: Shan, Khamti pok (tones for vocalic length/cluster) 'froth, scum, a bubble on the surface', Ahom puk 'foam, scum'.

P-Miao-Yao *mpwei^C = *mpwi^C 'boil' (v.i.) (Purnell 1970:23, F-S. Wang 1979:29, 161), with typical canonical reduction-right and *-i for *-j-: *mpwi^C < *mpuj[aq].

Jp. tag-ir-i 'boil, seethe, foam'.

Jp. taki, OJ ~ tagi '(seething/foaming water =) rapids, waterfall' (nominalized form; Ōno et al. 1982 derivation).

NOTE: Alternatively, a doublet with *-c- can be reconstructed at the Proto-Austronesian level; the Jp. /t/ reflex is ambiguous but both the P-Kadai -[0]- and the P-Miao-Yao *-i reflexes point to a basic Austro-Tai root with *-j-.

FOOT See LEG/, STALK/.
FORCE (DIVINE) See SPIRIT/.

FOREST/WILD P-Austro-Kadai *[q,ʔ]aḷats

P-Austronesian *[q,ʔ]aḷats$_1$: P-Malayo-Polynesian *ʔalat′ = *ʔalat′$_1$ 'forest' (Malagasy ala), Puyuma: Rikavong (Paiwanic) ʔaɬʔaɬas < *ʔaḷʔaḷas 'grove' (partial reduplication).

P-Kadai *(C$_i$)(a)lac: P-Li *(-)lac: Southern Li kɨən^A lat 'wild (lat) pig (kɨən^A < 'pig/boar') = 'boar'; Bao-ding lac; Zhong-sha, Hei-tu, Xi-fang lat; Bai-sha, Yuan-men, Qian-dui lat^L; Tong-shen, Bao-cheng lat^H 'id.'. P-Kam-Sui *-laay^C (through vocalic transfer): Sui, Mulao hmu^C la:i^H; Kam la:i^H; Maonan da:i^H 'boar' (hmu^C 'pig').

Jp. ara- '(of the forest/wilderness =) wild, savage'; ara-Fata 'field (-Fata) left uncultivated'.

NOTE: Kadai has /l/ rather than /r/ for P-Austro-Tai *ḷ as part of a cluster (Benedict 1975:164), indicating that the reconstructed P-Kadai *C$_i$ represents an original *q rather than *ʔ, from a P-Austro-Tai root: *qaḷats. Lati pu lu 'boar', the latter from *lac, also appears to belong to this root, but /pu/ is not glossed separately.

FOUR Austro-Kadai (I) *śəpat

P-Austronesian *x$_2$əpat = *śəpat (Tsuchida 1976:220).

(II) *śəśəpat

P-Austronesian- *x$_2$əx$_2$əpat = *śəśəpat (Dyen 1962, based on Tagalog).

Jp. yo-, OJ yö-, probably from *yöyö- (Note 2).

(III) *śəpapat

P-Kadai *pa^A < [śə]pa[pat] (cf. the reduplication in II): Laqua pe, Pupeo pɛ, Laha pa, Lati: Ban Phung/Man P'ang pu, Gelao pu (Clarke 1911), Gao pu^A, Thü pu.

NOTES

1. The Li forms are distinctive, with Shaved Head Loi: Five Fingers Mt. sət (Shaved Head Loi: Lia-mui sə) having the appearance of a syncopated (canonical reduction-center) derivative: *śə(pa)t > sət, but the other dialects reflect rather *sa(a)w, perhaps from *sa(a)b < *sap[at] (with *ə > *a assimilation): Southern Li śa:u, Northern Li śo, White Sand cho, Tong-shen tsho, Bao-ding tshau.

2. The reduplicated origin for the Japanese cognate is based on the fact that both 'five' and 'six' have an origin of this kind, with reduplication in evidence for still other numerals (10.3); phonologically, however, it can be derived simply from P-Austro-Tai *ŝəpat, with regular reflexes and standard canonical reduction-right.

FRIEND See ACCOMPANY/.

FRUIT/SEED P-Austro-Kadai (I) *(m)buway

P-Austronesian- *(m)buway: Paiwan (Southern) bua-buay (< *mbu[w]ay) 'flower', Atayal: Squliq buai ~ boai 'fruit'.

Jp. mi, OJ mï 'fruit, nut, berry, seed', from *moi < *muai < *mb[w]ay.

(II) *(m)bu-l̩-ay

P-Austronesian- *(m)bu-l̩-ay 'fruit': Saisiyat: Taii boLay, Kabalan mu:lay.

P-Kadai- *(C_s-)mu-[l,r]ay^C < *(-)mbul̩ay: P-Southern/Central Tai *hm[l,r]uay^C (with vocalic transfer): Siamese nuay^H 'classifier for spherical things, eggs, fruit', Lao nuoi^H 'id.', Shan hue 'anything round, spherical as a globe; classifier for anything round', Khamti hoi 'seed; classifier for eggs and round things generally', Ahom hui 'seed', Tho muei^H 'grain, drop; classifier for round objects, such as grain, seed, beans, bullets, etc.', Nung mui^H 'seed' (Savina 1924), mu:i^H 'grain; classifier for seed, grains, etc.' (F-K. Li 1977). P-Kam-Sui *[n]ui^C: Sui ńui (palatalized) 'classifier for seed'.

NOTES

1. An alternative reconstruction of the final of this root in *-əy (*muwəy > *mui > OJ mï) cannot be excluded.

2. F-K. Li (1977) does not reconstruct any Tai roots with initial *hml/r-although he does (p. 94) cite the Central Tai forms. The Southern Tai/Central Tai dental/labial variation exactly parallels that found in roots with initial *ʔb-l-, e.g., P-Tai *ʔb-l̩ian^A 'moon' yielded Siamese dian, Tho and Nung bian.

3. Tsuchida (1976:202) suggests a connection with P-Austronesian *buaq = *buwaq 'fruit' via an unidentified *-i suffix but notes that the loss of final *-q would be 'inexplicable'; cf. the similar analysis in Benedict 1975:298. It should be noted, however, that an *-l̩-infixed form of this root gave rise to P-Tai *ʔbl/rook 'flower' (F-K. Li 1977:91) = *ʔb-look < *ʔb-luak < *[qa-]bul̩ak (vocalic transfer form); see Benedict 1975:298–9. The 'seed-and-flower' associations of this infix also appear in Saisiyat: Taii poŋLäh < *puŋ-l̩-ah 'flower' < P-Austronesian *buŋah 'id.' (with *b- > p- assimilation to final *-h).

4. The Northern Kadai forms for 'fruit' appear to make up a cognate set: Lati mi; Gelao: Thü mə, Gao mei^C, possibly from *buway via *mbuway, as in Japanese, but a derivation from the *buwaq root via *mbuwaq (without infixation) appears likelier.

5. The *(m)bu-l̩-ay form is perhaps represented by P-Hesperonesian *bulaylay (partial reduplication) 'trunk (of elephant); proboscis (of insect)' via 'stem' or the like (cf. English *trunk*). Japanese has a pair of forms (with differing accents) of this kind: Fana 'flower' < P-Austro-Tai *baŋal (see FLOWER; Paiwan 'fruit' ~ 'flower') and 'nose'.

GIMLET See BORE/.
GLITTER See SHINE/.

GOD/SUN-GOD/SUN P-Austro-Kadai *(m)piḷi

P-Austronesian- *piḷi: Saaroa (Tsouic) pili 'shadow' (Ogawa and Asai 1935). For the semantics, cf. English *shade* 'shadow; disembodied spirit; ghost'.

P-Kadai- *phri^{A}: P-Southern/Central Tai id. 'devil, ghost' (F-K. Li 1977:88); also (Lao, White Tai, Tho, Nung) 'demon', (Shan) 'a being superior to man and inferior to brahmas', (Ahom) 'god, spirit'.

Jp. Fi, OJ Fyi = Fi 'sun'. Old Japanese also has the earlier meaning: 'spirit', also compounded in Jp. Fiziri, OJ Fyiziri = Fiziri 'god (Fi-) knower (sir-i)' = 'saint'; also Jp. Fiko 'god (Fi-) child (-ko)' = 'prince; male god'; also Jp. Fime, OJ Fyime = Fime 'god (Fi-) female (-me)' = 'princess' (see FEMALE/).

Jp. mi-, OJ myi- = mi- < *mpi[ri] '(godly/holy =) exalted (honorific)', as represented inter alia in Jp. miko, OJ myiko = miko 'prince', a doublet of Jp. Fiko (above); Jp. mikado, OJ myikadwo = mikado 'the Emperor' (-kado 'gate [of the palace]'); Jp. miya, OJ myiya = miya 'shrine' (-ya 'house/building'); also in the derived meaning of 'sun': Jp. minami 'sun (mi-) waves (-nami)' = 'south'.

Jp. -ri, the 'split allofam', as compounded in Jp. inari 'rice (ina-) god (-ri)' = 'god of harvests'.

NOTE: The connection of 'sun' with 'spirit' is recognized in Ōno et al. 1982 but hardly explained, while the linkage with mi- is not indicated. A better gloss than 'spirit' (Ōno et al. 1982) is 'god' inasmuch as /Fi/ appears in Old Japanese in the names of deities, e.g., (from the Kojiki) Opo-maga-tu-Fi-nö-kamï and Yaso-maga-tu-Fi-nö-kamï, the latter analyzed by Steenstrup (1983) as 'many' (Yaso) - 'askew' (maga) - [possessive] (-tu-) - 'spirit' [= 'god'] (Fi) - (see ANCESTORS/ for kamï).

GOURD/MELON P-Austro-Japanese *luRi

P-Austronesian- *lu[γ]i: P-Paiwanic *lu[γ]i: Paiwan lui 'gourd'.

Jp. uri 'melon'.

GRANDPARENT/GRANDCHILD ~ UNCLE/AUNT ~ NEPHEW/NIECE

P-Austro-Tai (I) *(m)pu

P-Austronesian *(m)pu: P-Malayo-Polynesian *pu 'sir' [term of address for older males], Motu (Southeastern Papua) bubu < *mpumpu 'term of address for elders' (Capell 1943 notes that this is normal 'grandparent' term in parts of the New Hebrides). P-Paiwanic *bubu < *mpumpu: Favorlang bubu, Ami fufu 'grandparent'; Paiwan vuvu '(one's own) grandparent, grandchild'.

P-Austronesian- *pua < *pu-a: P-Oceanic *pua: Fijian Macuata vua-'grandchild', Bua id. 'grandchild; niece (sister's child)' (cf. Tai for the suffixed *-a).

P-Kadai *(m)pu^{B}: P-Southern/Central Tai *phuu^{B} ~ P-Northern Tai *buu^{B} (< *mpuu^{B}) 'male' (F-K. Li 1977:64, with Note: 'In many dialects this word refers only to male birds, but in others to animals also'); also '(male person =) person' (listed as separate entry in F-K. Li 1977:64 - Lung-chow irregular puu^{B} in this sense). P-Kam-Sui *buu^{B}: T'en puu^{L}, Mulao pu^{L}, Mak pəu^{L} 'father'; Kam pu^{L} 'father; (compound) uncle (mother's younger sister's husband); (compound) uncle (mother's older sister's husband)'; Sui pu^{L} 'father; (compound) uncle (father's younger brother/father's younger sister's husband)'; from *mpuu^{B} (cf. Northern Tai). P-Li *phou^{B} < *phuu^{B}: Southern Li phau ~ fau 'sir; old man'; Tong-shen phau, Bao-ding phou 'grandfather'; White Sand phəu 'grandfather (father's father)' ~ pəu '(compound) grandchild (grandfather speaking)' (self-reciprocal; cf. Austronesian under III).

P-Kadai- *pua^{A} < *pu-a (cf. Proto-Oceanic): P-Southern Tai *phua^{A} 'husband': Siamese, Lao phua; Black Tai fua; Khamti, Shan, White Tai pho; Ahom phu.

P-Miao-Yao- *ph[ou]^{C}: White Miao phaɨ 'male of certain large animals', Bunu pu '(compound) cock'; also *ph[ou]^{A}: Northern Miao a-phɨ 'grandfather' (cited under Xiang-xi in Lombard-Salmon 1972).

(II) *pu-i

P-Miao-Yao- *pui^{C} < *pu-i: P-Yao- *pwei^{B}: Chiengrai pwei '(compound) uncle (mother's older sister's husband)', Hsing-an id. 'uncle (mother's older sister's husband)'.

Jp. oi, OJ woFï 'nephew', from wo-Fï (wo- 'male'); also Jp. mei, OJ meFi (= *meFï) 'niece' (me- 'female'), from *-Fui < *-pu-i, with 'kin term' suffixed *-i (10.44).

Ryukyuan: Yonaguni bui-ha 'nephew/niece' (-ha not analyzed), perhaps from *mpui-, suggesting P-Japanese-Ryukyuan *(m)pu-i.

(III) *ʔa(m)pu

P-Austronesian *ʔa(m)pu: P-Hesperonesian *ʔə(m)pu = *ʔa(m)pu ~ (destress doublet) *ʔə(m)pu 'grandfather/grandchild' (self-reciprocal). P-Southeastern Papua *a(m)pu 'uncle (mother's brother)': Paiwa yavu, Mukawa abu, Ubir, Wedaw avu, Wagawaga au. P-Paiwanic *ʔapu: Thao ʔapu 'grandparent', Taokas tapu < *t-apu 'father'.

P-Kadai- *C_i(a)pu^C < *ʔ(a)pu: P-Southern/Central Tai *puu^C ~ P-Northern Tai *paw^C 'paternal grandfather' (F-K. Li 1977:62, 291) (with variable vocalic transfer); also (tonal doublet) P-Southern Tai- *paw^B: Lao paw 'old, old man; (compound) great-grandfather', Black Tai id. 'great-grandfather'.

(IV) *ʔa(m)puʔa(m)pu

P-Austronesian- *ʔapuʔapu: Pazeh (Paiwanic) ʔapuʔapu 'ancestor'.

P-Kadai- *ʔaaw^A < *ʔabuʔabu < *ʔampuʔampu: P-Southern Tai/P-Northern Tai *ʔaaw^A ~ P-Central Tai *ʔaaw^C 'uncle' (father's younger brother)' (F-K. Li 1977:243, 292). Laha: Than-Uyên a:u 'father'. Lao also has a *k- prefixed form (cf. ANCESTORS/): kaaw^B 'male (speaking of animals)'.

NOTES

1. For the *ʔa- forms under (II) and (III), see 10.43.
2. For an interpretation of the historically significant Japanese cognate, see 10.40.
3. This complex etymon has given rise to a host of forms in Austronesian, with Blust (1980c) recognizing no fewer than eight (!) allofams: *ampu ~ *əmpu (with destressing) ~ *umpu (with *a > *u assimilation) ~ *impu (cf. P-Austronesian *ʔina 'mother'), all regarded as basically vocative, and the corresponding *t- prefixes forms, all considered referential. Dempwolff 1938 also cites *makəmpu 'grandchild', apparently a doubly prefixed (*ma-k-) form; cf. the *k- prefixed Lao form under (III); also the analysis by Dahl (see 9.43).

GRANDFATHER/OLD (MAN) P-Austro-Kadai *ʔaki

P-Austronesian *ʔaki 'grandfather' (Blust 1981c); also (Bikol) 'child', reflecting the basic Austronesian self-reciprocity.

P-Kadai- *kee^{C} < *kia < *[ʔa]ki-a, with 'kin term' suffixed *-a (10.45): P-Tai *kee^{C} 'old, aged' (F-K. Li 1977:187, 273); also (Khamti) '(compound) headman of village', (Ahom) 'the Assamese title of Barua; a great man'. P-Kam-Sui- *d3C < *[k]ee^{C}: Mak, Maonan ce 'old (man)'.

Jp. okina, OJ ökyina = *ökina 'old man', from *öki-na (destressed form). An earlier kinship usage of this term is indicated by suffixed -na, described by Kawamoto (1978) as employed with kinship terms to confer a quality of endearment, e.g., se-na 'dear man, dear brother' (for se-, see 10.41).

NOTES

1. For the *ʔa- element, see 10.43.
2. The reduced and unsuffixed form of this root appears in the mythic name: Izanaki < *Iza-na-ki 'Creator' (see ONE - Note).

GRASP See HOLD/.
GRAVE See WIDE OPEN/.
GRAVY See FLUID/.
GRAY (HAIR) See LIGHT/.

GREEN/BLUE P-Austro-Kadai *hidzaw

P-Austronesian *[h]idz$_{1}$aw: P-Malayo-Polynesian *hid'aw 'green'.

P-Kadai- *[q/k]hiaw^{A} < *[q/k-]hi[dz]aw (prefixed, with regular medial *-dz- > [0]): P-Tai *xiaw^{A} 'green' (F-K. Li 1977:208, 294); also (Siamese) 'azure'. P-Kam-Sui *syiu^{A} < *xi[a]u^{A} 'green' (Sui ~ 'blue'): Kam su; Sui śu ~ hyu; T'en hiu; Mulao həu; Maonan yu; Mak yəu^{H}. Lakkia yau^{A} 'green'. P-Li *khiau^{A}: Ha khiau 'green' ~ khio 'blue'; Northern Li khiau ~ kheu ~ khiu; Bao-ding, Zhong-sha, Hei-tu, Tong-shen, Bao-cheng, White Sand khi:u 'green' ~ 'blue'; Xi-fang, Bai-sha, Yuan-men, Qian-dui khiu 'id.'; Jia-mao kheu 'id.'.

Jp. ao, OJ awo 'green/blue', from *[dz]aw-wo, with suffixed -wo < *-po (9.44).

Jp. massao 'deep blue', with 'intensive' ma(s)-.

Jp. ai, OJ awi 'indigo', from *[dz]aw-i, with suffixed -i (9.42).

GREEN/RAW/VEGETABLE P-Austro-Kadai *(n)Cama

P-Austronesian- *[C,s]ama: Sediq (Atayalic) sama 'green'.

P-Kadai- *C_t-ma^A: P-Kam-Sui *ʔmaa^A '(greens =) vegetable': Maonan ʔma; Sui ʔma ~ ma^H; Mulao ma^H; Mak, T'en maa^H.

Jp. nama 'green/raw/unripe'.

Jp. na 'greens, vegetables' (with canonical reduction-right).

NOTE: For the semantics, cf. English *green/greens;* also P-Austronesian *qa(n)taq 'unripe/raw' (Dahl 1976:30), often cited in the *m- prefixed form: *ma(n)taq, but both 'raw' and 'green' in Paiwan, with two dialects (Paiwan, Stimul) making a curious secondary distinction: *mataq 'raw/unripe' vs. *matak 'green' (*-q > *-k through reduced stress; cf. *qa- > *ka- under 9.21).

GRIP/HAND P-Austro-Japanese *[t,C]aŋ[t,C]aŋ

P-Austronesian- *[t,C]aŋ[t,C]aŋ: P-Hesperonesian *taŋtaŋ 'grip with the hand'.

P-Austronesian- *[t,C]aŋ-an: P-Malayo-Polynesian *taŋ-an 'hand; means for gripping' (*-an is referent-focus marker).

Jp. te ~ (compound) ta- 'hand', from *të < *tai.

GUM (OF TREE)/RESIN P-Austro-Kadai *C_{ts}ayaŋ

P-Kadai- *C_{ts}ayaŋ^A: P-Southern/Central Tai *ʔyaaŋ^A ~ P-Northern Tai *ʔyɨaŋ^A 'gum, resin' (F-K. Li 1977:181) (with vocalic transfer [after destressing in Northern Tai]).

Jp. yani, with suffixed *-i (9.42).

HAIR^I P-Austro-Japanese *bukas

P-Austronesian- *bukas: P-South Formosan *buk$əs_1$ (Tsuchida 1976:219) = *bukas ~ (destress doublet) *bukas 'hair' = 'head hair'; also (Pazeh) 'body hair, feather, down'.

Jp. ke, OJ kë 'body hair, feather, down', from *kai.

Jp. kami < *ka-mi 'head hair' (for -mi, see HAIR^{II}).

Jp. siraga < *sira-ga 'white/gray (sira-) hair'.

Jp. Fige, OJ Fyigë < *Fi-gë '(cheek + hair =) beard' (for Fi-, see CHEEK).

NOTES

1. Tsouic and Paiwanic generally show reflexes for the destressed form (*bukəs) but V_2 = /a/ is maintained in Kabalan bu:qas < *búkas.

2. Tsuchida (1976:219) and other Austronesianists have attempted to relate this root to P-Malayo-Polynesian *buhuk 'head hair', also (Toba-Batak) 'body hair', (Javanese) 'beard', from *busuk (see 7.69), with the Proto-South Formosan root generally regarded as the product of *s ~ *k metathesis. The vowels are a problem here, however, and the Japanese cognate points to the reverse kind of metathesis, if any. It is possible that an original trisyllabic root: *busukas ~ *buśukas underlies both the Hesperonesian and the South Formosan forms, with canonical reduction-right in Hesperonesian and canonical reduction-center (syncopation) in South Formosan, the latter indicated by Thao húkiš 'head hair', with an otherwise 'inexplicable' (Tsuchida 1976:256) initial h- (Thao /h/ < Pan *X = *ś). This reconstruction would also have the bonus of explaining the widespread destressed vowel (*bukəs) as having been originally in SYL-3 (*buśukəs), a notoriously 'weak' position in Austronesian (6.4). The Japanese cognate, a product of canonical reduction-left, unfortunately is of no help in this connection and mainland cognates appear to be lacking.

HAIR[II] P-Austro-Kadai *(N)qo(m)bitś

P-Austronesian- *qu(m)bi[tś]: P-South Formosan *qubiS_{16} (Tsuchida 1976:162) 'pubic hair'; also (Ami) 'feather/down; plume': generally reflexes for *qubis, but Thao qu:mis < *qumbis (not cited in Tsuchida 1976).

P-Austronesian *kumitś < *Nqu**mitś: P-Malayo-Polynesian *kumit'** = *kumits$_{12}$ 'beard'. P-Formosan *kumis: Ami kuməs ~ koməs (destressed forms), Bunun komis 'pubic hair', Atayalic: C?iuli komis 'body hair, pubic hair'; also Saisiyat romis < *k-r-umis (infixed form) 'beard'.

P-Hesperonesian *gumi 'beard', with secondary voicing and loss of final, probably from a reduplicated form; cf. P-Polynesian *kumikumi 'beard, chin'.

P-Kadai- *C_{ts}omi^{A} < *[q]ombi[s]: P-Southern/Central Tai *hmo(o)y^{A} ~ P-Northern Tai *hmii^{A} 'pubic hair' (F-K. Li 1977:75); also (Shan, White Tai) 'axillary hair', (Shan) 'beard'. P-Kam-Sui *-moy^{A}: Maonan moi '(compound) eyebrow' (with vocalic transfer and loss of initial in close-juncture). Be mui^{A} < *moi^{A} 'id.' (as in Maonan).

Jp. kami, OJ kamyi = kami < *ka-mi 'head hair' (for ka-, see HAIR[I]).

NOTES

1. It is possible that the initial *q- and *Nq- > *k- doublet in this etymon had already developed at an early (Proto-Austro-Kadai) level; the Kadai as well as the Japanese cognates are ambiguous both for the initial and the medial (*-mb- ~ *-m- > /m/).

2. The compound nature of Jp. kami is indicated by the fact that ka- also appears in the Ryukyuan words for 'hair' but in association with different final elements (all unanalyzed): Shuri karazi ~ kantu, Yonaguni karan ~ kanan. The earlier meaning of the Japanese compound was probably 'hair-and-beard' as a hirsute unit, with -mi < *-mbi as 'beard'.

HAIR/BAST/HEMP/BEARD/EYEBROW P-Austro-Tai (I) *(n)[ts, tš]a(m)boc

P-Austronesian *(n)ts$_{123}$a(m)bu[c]: P-Hesperonesian *t′abut = *t′$_{12}$abut 'bast [fibrous plant material: 'plant hair']'; P-Philippine *săbut 'pubic hair; feather'; also (Northern Philippine: Bolinao, Sambal, Botolan) 'head hair'; P-Hesperonesian also *d′[a,ə](m)but 'hair'; also (Toba-Batak) 'chest hair'; (Javanese) 'pubic hair', from *nts$_{12}$a(m)but.

P-Kadai *(a-)(n)tsam^{A} 'head hair', from *(qa-)(n)tsam[boc], with optional nasal increment as in Austronesian and optional *qa- prefixation as in Japanese: Laqua zam < *nsam; Pupeo cam; Laha: Ban Bung, Noong Lay s[a breve]m; Than-Uyên mə-sam (cf. Gelao). Lati a-so < *[q]a-sa[m], Gelao ma-saŋ < *ma-sam (Clarke 1911) (cf. Laha: Than-Uyên), Thü ləso < *-sa[m] (prefixed lə- also in 'ear', 'breast'), Gao san^{A} < *sa[m].

Jp. asa 'hemp', from *[q]a-sa[wo], with *qa- prefixation (as in Lati) and canonical reduction-right.

OJ sawo 'id.' (without prefixation).

Jp. o (doublet form), from *wo < *åwo (with canonical reduction-left).

OJ swo = so (doublet form), from *sao < *sa(w)o.

(II) *[ts,tš]-r-a(m)boc

P-Austronesian *ra(m)buc < *[ts,tš]-r-a(m)boc (infixed *-r- derivative with canonical reduction-left): P-Hesperonesian *[r]a(m)but 'hairy'; also (Malay, Javanese) 'head hair'. P-Paiwanic *rabuC: P-Paiwan *ravuts 'fine *Miscanthus* [used for thatch]', Puyuma rabu[t.] 'coarse *Miscanthus*'.

P-Kadai- *[SYL]mrom^{A} < *[ro]m-rom[boc] (partial reduplication with *a > *o assimilation): P-Li *[SYL]mrom^{A} '(cp. 'head') head hair':

Central Li, Hei-tu nom; Zhong-sha tom; Xi-fang, Bai-sha rom; also Tong-shen tom '(compound) pigtail'.

P-Kadai- *p-rom^{A} < *[ro]p-rom[boc] (dissimilated reduplicated form with vocalism as above): P-Tai *phrom^{A} 'head hair' (F-K. Li 1977:88, 272).

P-Kadai- *p-ram^{A} < *[ra]p-ram[boc] (as above but without the *a > *o assimilation): P-Central Tai/P-Northern Tai *phram^{A}: T'ien-pao phyam, Saek phram (cited in F-K. Li 1977:89). P-Kam-Sui *p-ram: Mulao pγam; Kam, Sui, Mak, Maonan pyam; T'en pem.

P-Miao-Yao *(n)[sr]am$^{A/C}$: P-Yao *syaam^{A}: Mien syaam ~ śyaam. P-Miao *n[ã]^{C} (F-S. Wang 1979:96, 183) = *nsr[ã]^{C}: generally reflexes for initial *ń-, but Kanao shã^{C}. Also the doublet: *[sr]ɔm^{A}: P-Yao *s[y]ɔm^{A}: Mun sɔm, from *[ts,tš]-r-om[boc], through *a > *o assimilation (cf. Kadai).

Jp. mayu, OJ maywo = mayo < *ma-yo 'eye (ma-) hair (-yo)' = 'eyebrow', from *yo[bot] (with *a > *o assimilation, as in Kadai and Miao-Yao).

NOTE: This is the basic, generic 'hair' etymon in Austro-Tai, represented in all four divisions of the stock, with a notable Proto-Austro-Japanese extension to 'plant hair' > 'bast/hemp'. It is unique in presenting solid evidence for infixed *-r- at the earliest (Proto-Austro-Tai) level, although the reconstruction of the cluster: *sr- for Proto-Miao-Yao remains provisional; note infixed *-r- also in HAIR^{I}. It also furnishes evidence for a 'disyllabic drive' (5.1) as early as the Proto-Austro-Kadai level, with *ra(m)boc already functioning as a separate lexical entity at that horizon, both in Kadai and Japanese as well as in Austronesian. Finally, it also provides evidence for widespread *a > *o assimilation on the mainland, thus indirectly demonstrating the continued existence of SYL-2 (*-boc) in this root at an early period.

HAMMER See BEAT/.

HAND/FIVE P-Austro-Kadai *l̥ima

P-Austronesian *lima = *l̥ima (Tsuchida 1976:231) 'five' = 'hand; five': P-Rukai *l̥ima 'five' ~ *alima < *qa-lima 'hand'.

P-Kadai *(ka-)lV$_p$ma^A < *(ka-)lima (with *l for *l̥ after *k- - see Benedict 1975:164) 'hand' (~ 'five'): P-Southern/Central Tai *mɨ^A 'hand' (F-K. Li 1977:74, 265), from *mya (with vocalic transfer). P-Kam-Sui *(-)myaa^A 'id.': Kam mya^L, Mulao nyaa^L (< *myaa^L), but T'en myaa^H; Sui mya^H ~ miə^H, Mak mii^H, from *(ka-)myaa (optional prefixation > 'high' tone; cf. Li: Jia-mao (below)). P-Li *[SYL]ma^A 'five': Southern Li, , Hei-tu ma; Bao-ding, Zhong-sha, Xi-fang, White Sand, Bai-sha, Yuan-men, Tong-shan, Bao-cheng pa^L; Qian-dui pha^L; Bupäli bo = po; Jia-mao pu^L, from *[l̥i]ma; also *meɨ^A 'hand', from *[l̥ə]ma (through destress > vocalic transfer; cf. Tai, Kam-Sui): Southern Li məɨ; White Sand mɨ; Bao-ding, Zhong-sha, Xi-fang, Bai-sha, Yuan-men, Tong-shen, Bao-cheng, Qian-dui meɨ; also *k-ma 'hand': Bupäli ma, Jia-mao kɨ-ma, without destress > vocalic transfer and with high tone after the *k- prefix (cf. Kam-Sui, above; see Footnote 1). Laqua mə 'five' (Bonifacy 1905), from *ma < *[li]ma; also kha-mi 'hand' (Lajonquière 1906), from *ka-mɨ < *ka-mya. Lati: Man P'ang mg ≈ *mɨ 'five; (compound) hand'; Ban Phung id. 'five; hand' (Robert 1913), ŋ < *mɨ 'five' (Bonifacy 1906), from *mya. Gelao bu 'five' (Clarke 1911), Gao mpu^A 'id.', Thü mu 'id.' (cp. for 'fifteen'), from *[li]ma; Thü also mlen 'five', from *lV$_i$me (secondary nasalization) < *l[i]ma (with retention of *l through metathesis with *m); also Gelao mau 'hand' (Clarke 1911), Gao mpau^A 'id.', from *ma.

Jp. itutu, OJ itu ~ (compound) i- 'five', from *i-tu-tu (with reduplication of the numeral suffix: -tu), from *yi[ma].

NOTES

1. The reduplication here fits into an over-all pattern of reduplication of numerals (10.3); this regularly involved reduplication of SYL-1, but in this case the product: *yi- was precluded from this by the rules of Japanese phonology: *yiyi- > *yii- > *yi- > i-, hence the reduplication of the -tu suffix, with this feature not appearing in Old Japanese compounds.

2. Japanese has retained only the secondary (numeral) sense of this root, with replacement in the primary ('hand') sense by GRIP/HAND. Kadai, on the other hand, has retained the primary meaning throughout the family, with replacement as a numeral in Lakkia/Be/Kam/Tai by Chinese 'five' (Benedict 1975:80).

HARD P-Austro-Japanese *makatś

P-Austronesian- *makats$_{123}$: P-Hesperonesian *makat′ = *makat′$_{12}$.

Jp. kata '(the hardener =) mold', from *kat-a, with nominalizing *-a suffix (9.41).

Jp. kata- 'hard'.

NOTE: The unsuffixed root: *makatś > *[ma]ka is perhaps represented in Jp. kane 'metal; bell', compounded with -ne 'ridge' (see PEAK/ - Note), the reference being to the characteristic ridges produced by molds in cast metal objects.

HEAD (OF LINEAGE)/FATHER P-Austro-Japanese *da[t,C]u

P-Austronesian- *da[t,C]u: P-Malayo-Polynesian *datu 'head of a lineage (kin group)'; also (Malay) 'grandfather', (Maanyan, Kapuas, Ba'amang) 'great-grandparent' (cited in Blust 1980c); Zorc (1981) cites *ḍatu? 'chief'.

Jp. ti ~ titi 'father', from *tï < *tui < *[da]tu-i, with 'kin term' suffixed *-i (10.44.

NOTE: As analyzed by Blust 1980c), the Proto-Malayo-Polynesian root shows a variety of 'kin term' suffixes corresponding to the *-i represented in the Japanese cognate: Tagalog has -?, Maanyan et al. -ŋ, while Malay has created a distinction between a suffixed -k form ('head of a kin group') and a suffixed -ŋ form ('grandfather').

HEAP See FILL/.
HEMP See HAIR/.
HIGH See RISE/.

HILL/SUMMIT P-Austro-Japanese *po(ŋ)krak

P-Austronesian- *pu(ń)cak: P-Hesperonesian pu([ng′])k′ak 'summit'.

Jp. oka, OJ woka ~ wo 'hill'.

HILLOCK See MOUNTAIN/.

HIND-PART/TAIL P-Austro-Kadai *(m)po(ŋ)kor

P-Austronesian *(m)puŋku[r,γ]: P-Hesperonesian *pu(ŋ)ku[r] = *(m)puŋku[r,γ] 'hind-part': Fijian mbuku 'pointed hind-end, tail'.

P-Kadai *[SYL]kon^{C} < *[po]kor: P-Southern/Central Tai *kon^{C} 'anus, buttocks' (F-K. Li 1977:187).

Jp. o, OJ wo 'tail'.

HIT/BEAT/POUND P-Austro-Tai *(n)tak(n)tak

P-Austronesian- *dakdak: P-Hesperonesian id. 'hit with a hammer'; also (Tagalog) 'strike, beat', (Maranao) 'pound, launder by pounding with a paddle' (Blust 1976); from *ntakntak.

P-Kadai- *taak < *taktak: P-Kam-Sui- *taak 'pound (nail)': Sui, Maonan ta:k.

P-Miao-Yao *nta? < *ntak: Yao: Mien: Chiengrai da?^{H} 'beat' (child language).

Jp. tatak-i 'hit, beat, pound'.

NOTES

1. Alternatively, an early doublet: *dakdak can be set up to account for the Proto-Austronesian form, with the Japanese cognate ambiguous in this respect; cf. Paiwan d'akad'ak (< *dakdak) 'leg with which one kicks', d'-m-akad'ak 'kick someone or something'.

2. Blust (1976a:119) has reconstructed the Proto-Hesperonesian root as *da(Sak)daSak = *da(sak)dasak on the basis of his 'vowel deletion hypothesis', which involves the appearance of two sets of voiced stops: aspirates vs. non-aspirates, in certain North Sarawak (Borneo) languages, e.g., for this root Kelabit has ned^{h}ak 'slap or tamp wet clay with a large paddle or club'. As pointed out by Dahl (1976:130), the Formosan evidence stands in opposition to this thesis and certainly in this widespread Austro-Tai etymon, at any rate, the evidence appears to rule out the insertion of an *s. As for the set of double reflexes in North Sarawak, it would appear far more likely that, in general at least, they reflect an underlying distinction between *stop > aspirate vs *nasal increment + stop > non-aspirate (cf. the discussion re P-Austronesian *b in 7.30).

HIT (MARK)/RIGHT (ON THE MARK) P-Austro-Kadai *[t,C]ama

P-Austronesian- *[t,C]ama: P-Hesperonesian *tama? 'hit the mark, correct' (Zorc 1981), also cited as *tama in Dempwolff 1938 under derived sense of 'penetrate'.

P-Kadai- *C$_1$(a)man$^{A/C}$ < *[t](a)maan$^{A/C}$, incorporating the referent-focus marker *-an: P-Southern/Central Tai *meen^{C} (< *maan^{C} through vocalic transfer, with typical vocalic fronting before dental final) 'hit (mark); be right, true, certain; exact(ly)': Siamese, Lao mɛɛn; Shan,

Black Tai, White Tai, Tho mɛn. P-Li *man (without vocalic transfer): White Sand maŋ 'true'; Northern Li man '(true =) yes'; Bao-ding, Zhong-sha, Yuan-men, Tong-shen, Qian-dui, Bao-cheng man 'correct/right; yes' (Chinese gloss: shì [Chinese character #5794]).

Jp. ma- (combining form) 'right (in the middle, etc.), pure, true'.

Jp. mame, OJ mamë 'sincere, honest', from a reduplicated base: *ma-mai, incorporating the referent-focus marker *-an or *-i.

NOTE: In view of the Kadai evidence in this root, it is likelier that the incorporated referent-focus marker in Japanese is *-an rather than *-i, both of which yield OJ -ë (see 9.41).

HOLD (IN HAND ~ MOUTH)/BITE/CHEW P-Austro-Tai (I) *kamkam

P-Austronesian *kamkam: P-Hesperonesian id. 'take hold of, seize'.

P-Kadai- *kam(kam)^{A}: P-Tai *kam^{A} ~ *kham^{A} (Black Tai, Lao, White Tai doublet) 'hold in the hand' (F-K. Li 1977:186); also (Shan) 'lay hold of, clench', (Tho) 'take, seize', (Khamti) 'fistful', (Siamese, Lao) 'fist', (Siamese, Nung) 'handful', (Ahom) 'prohibit, hinder', (Khamti) 'taboo' (v.), (Dioi) 'maintain, control', (Saek) 'punishment'. P-Kam-Sui-*kham^{A}: Mak kham 'press down on/keep a tight grip on'. P-Li *kam^{B}: Tong-shen, Qian-dui, Bao-cheng kam 'eat (as cows eat grass)' = 'hold in mouth and chew/ruminate'.

P-Kadai- *kaam^{A} < *kamkam: P-Central Tai/P-Northern Tai *kaam^{A} 'hold in the mouth' (F-K. Li 1977:200).

P-Kadai- *kaam^{B} < *kamkam (with tonal variation): P-Central/Southern Tai *kaam^{B} '(holders in the mouth =) jaws': Siamese, Lao, Nung kaam.

(II) *kamkam > *kamgam

P-Austronesian- *kamgam: P-Hesperonesian- id.: Ngadyu Dayak k-[a breve]r-ŋgam < *kamgam (with *m > /ŋ/ assimilation) 'handful' (cited in Dempwolff 1938 under *kəmkəm - see III).

P-Kadai- *gam^{A} < *[kam]gam: P-Southern Tai/P-Northern Tai *gam^{A} 'mouthful, bite' (F-K. Li 1977:198); also (Shan) 'a small quantity taken in the fingers at one time; handful or mouthful of food'.

P-Kadai- *$C_{ts}V_i$ŋam^A < *[ka]ŋgam < *kamgam (with *m > *ŋ assimilation, as in Ngadyu Dayak): P-Southern Tai/P-Northern Tai *?ŋam^A: Shan ŋam^H 'lay hold of, grasp, clinch', Saek id. 'gnaw slowly'. P-Kam-Sui *?ŋam^A 'hold in mouth': Sui ?ŋam, Maonan ŋgam^H, Mulao ŋam^H; also (palatalized allofam) P-Kam-Sui *?ńam^A: Sui, Maonan ?ńam; Mulao ńam^H 'hold/grasp'; Mak id. 'clench fist, take hold of'; also (tonal variant) Sui ńam^{B-h} 'compel' (cf. Tai under I). Lakkia ŋyam^A < *?ŋam^A 'hold/grasp' (palatalized).

P-Kadai- *(C_{ts})V_iŋam^B (tonal variant): P-Southern Tai-*hŋam^B: Shan ŋam^H 'bite, bite hard, as a dog' ~ ŋam^L '(bite down on =) draw the lips between the teeth'. P-Kam-Sui- *ŋam^B: Kam ŋam 'gnaw'.

P-Miao-Yao- *khamgam^B: Yao: Mun: Haininh khamŋam^{BB} '(holders in the mouth =) jaws', from *khamgam (with secondary nasalization).

P-Miao-Yao- *ŋgam^C < *[ka]ŋgam < *kamgam (cf. Kadai): Yao: Mun: Haininh gam^C 'press (with the hand), crush (with the hand)'; also 'copulate (animals)'.

Jp. kam-i 'bite, gnaw, chew'.

(III) *kəmkəm

P-Austronesian- *kəmkəm: P-Hesperonesian id. 'hold'; also (Tagalog) 'handful' (Toba-Batak) 'hold in the mouth'.

P-Kadai- *kom(kom)^C: P-Southern Tai/P-Northern Tai *khom^C: Lao khom 'press from above, oppress', Saek id. 'press down'. P-Li *kom^C: Southern Li kom^C luoi^B 'press, squeeze' = 'press/squeeze (kom^C) down on (luoi^B)'; also *kom^B: Bao-ding, Zhong-sha, Hei-tu, Xi-fang, Yuen-men kom 'chew (as cows the grass)' (doublet of *-am root cited under I).

P-Miao-Yao- *gom^C < *[kom]kom (secondary nasalization): Yao: Mien: Chiengrai kom^L '(hold arms/legs' =) to fetter, shackle'.

(IV) *kəmkəm > *gəmgəm

P-Austronesian *gəmgəm: P-Malayo-Polynesian id. 'make a fist', also (Malay) 'fist', (Fijian) 'hand-hold, grip', (Samoan) 'press', (Toba-Batak) 'govern'. P-Paiwanic *gəmgəm: Paiwan gəmgəm 'fist', g-m-

əmgəm 'grasp object in hand', pa-gəmgəm 'crush or grasp forcefully in hand'; Rukai wa-gəmgəm 'squeeze (in hand)' (Ferrell 1969).

P-Kadai- *gom^{A}: Lakkia kom^{L} 'hold in mouth'.

P-Miao-Yao *ŋgom^{A} < *[g-r-o]mg-r-om (with infixed *-r-, as in Ngadyu Dayak under II, and with *m > *ŋ assimilation, as in Ngadyu Dayak and Tai under II): Yao: Mun: Haininh geom^{A} 'hold in mouth'.

NOTE: This widespread etymon, which well illustrates the /a/ ~ /ə/ variation in the stock, is remarkable for its polysemy. The core meaning appears to have been 'hold in hand/seize', with early (Proto-Austro-Tai level) extension to 'hold in mouth' (> 'bite/gnaw/chew'), apparently via 'the amount that can be held in hand/handful/mouthful' (see Shan gloss under II). The much better represented /a/ allofamic group has a Japanese cognate (kam-i); the /ə/ group has a possible Japanese cognate in kom-i 'be packed, crowded' = 'be squeezed together'; cf. the semantic development under both III and IV: 'hold' > 'press/squeeze'.

HOLD/GRASP P-Austro-Japanese *ramoc

P-Austronesian *ramuc: P-Hesperonesian- *ramut: Javanese ramót 'grasp (of birds)'. Proto-Rukai-Tsouic *ramucu (with *-u 'echo vowel') '(the grasper =) hand (Kanakanabu, Saaroa), hand/arm' (Tsou) (Tsuchida 1976:179).

Jp. mot-i, OJ möt-i 'have, take, hold'.

NOTE: Tsuchida (1976:202) cites the Javanese form but appears to be overly conservative in regarding the meaning as 'too deviant' to establish cognation with the Tsouic root.

HOLD TOGETHER/JAW/CLOSE/CREVICE/VALLEY

P-Austro-Kadai *ka(m)pi[t,c] > *ga(m)pi[t,c]

P-Austronesian- *ka(m)pi[t,c]: P-Hesperonesian *ka(m)pit 'hold together'; also (Toba-Batak) 'pinch' ~ (destress doublet) P-Hesperonesian *kə(m)pit 'hold together, clamp': P-Polynesian *kapi < *kampi[t] 'wedge, crowd, occupy'; also (Raratongan) 'cover, close, joint'; also (cited under above) *kapit-i (for suffixed *-i, see 9.42) 'joined,

clenched' (Maori), 'close, bring together, unite' (Tuamotuan); Proto-Polynesian also (nominalized - see 9.42) *kapiti '(the close/shut in space =) cleft, crevice'.

P-Austronesian- *ga(m)pit 'hold together'; also (Toba-Batak) 'pinch', (Javanese) 'pincers'.

P-Kadai- *[SYL]pit < *[ka]pit: P-Southern Tai- *pit: Siamese pit 'close, stop up, cover'.

Jp. otogai, OJ otogaFyi = otogaFi 'lower (oto-) joining (-gaFi)' = 'lower jaw, chin' (Martin 1979 analysis); better: 'lower holder (of mouth) together'; cf. Proto-Hesperonesian 'clamp'.

Jp. kai, OJ kaFyi = kaFi '(the close/shut in space =) valley'; cf. Proto-Polynesian 'cleft, crevice'.

HOLE/CAVE P-Austro-Japanese *qanan

P-Austronesian *qanan: P-Polynesian *ʔana 'cave'. P-Paiwanic *qanan: Puyuma: Katipul ʔanan 'hole, cave' (Ferrell 1969); Katipul (Ting), Kasabakan ŋanan 'hole' (secondary nasalization of the initial).

Jp. ana 'hole, cave'.

HOLE (IN GROUND) See WIDE OPEN/.

HOOK P-Austro-Japanese *ka(ŋ)kriŋ

P-Austronesian- *ka(ń)ciŋ: P-Hesperonesian *ka([ng'])k'iŋ 'means of fastening'; also (Tagalog) 'hook'.

Jp. kagi.

HORN P-Austro-Kadai *tśuŋəw

P-Austronesian *ts_{123}uŋu: P-Hesperonesian *t'uŋu = *ts_{12}uŋu. Rukai: Maga (Paiwanic) súŋu 'knitting instrument with the horn of goat at the end' (Tsuchida 1976:165); Tsouic: *(ʔu-)suŋu: Tsou suŋu, Kanakanabu ʔuʔúŋu, Saaroa ʔuuŋu; see 9.22 for the prefixed *ʔu-.

P-Kadai- *(h)ŋwua^{A} < *(s-)ŋwua < *(tś)uŋua (through vocalic transfer) < *tśuŋu-a '(the horned animal =) cattle/ox' (see 9.42 for suffixed *-a): P-Southern/Central Tai *(h)ŋwua^{A}.

P-Miao-Yao *ŋo(ŋ)^{A} < *ŋu(ŋ)^{A} 'cattle' (Purnell 1970:35), from an (optionally) reduplicated *ŋu(-ŋu) < *[tś]uŋu(ŋu) through canonical reduction-left, representing a typical Austro-Tai line of development (see 5.0 for Austronesian parallels).

Jp. tuno, OJ tunwo = tuno.

NOTES

1. A parallel 'horn' > 'deer' semantic development is [presented by the Formosan root: *waqa (Benedict 1975:317).

2. Tsuchida (1976:165 and footnote 99) experienced great difficulty with the Kanakanabu and Saaroa forms because of his failure to recognize the *ʔu- prefixation. The initial of the root has been assimilated to that of the prefix, hence the reconstruction remains in some doubt: *ts$_{13}$-, with the Jp. /t/ reflex pointing to *ts$_{3}$- = *tś-.

3. F-K. Li (1977:239) reconstructs the Tai root as *ŋwua^{A}, but the unparalleled (in Tai) *ŋw- + *u combination presents unusual problems. The unanticipated initial h- appears in Ahom (hu) and elsewhere, leading Gedney (1981) to declare: 'There seems to be no way within the usual rules of comparative Tai phonology to reconcile the three different initials occurring in the forms ŋua (or ŋoo), wua (or woo or voo), and hua (or hoo).' Certainly a doublet form with *h- must be recognized, but a variation of this kind is common enough in Tai, while the *ŋwua > *wua shift is only to be expected. F-K. Li (1977:240) questions the cognation of the Central Tai (Tho, Nung) root of *moo^{A} = */mɔɔ/^{A} shape, on the same *A tone, but the indicated development: *ŋwua^{A} > *moo^{A}, involving vocalic dissimilation, hardly presents a problem.

4. The Tai root, with suffixed *-a, made its way early into the eastern Tibeto-Burman area, where it is represented by a root of *ŋwa type (Benedict 1972), but the Chinese forms: [Chinese character #4737] Archaic ŋ[i sub-inverted-breve]w[schwa breve]g^{A} > Middle ŋ[i sub-inverted-breve]ɔu^{A}, including the Modern (pinyin) 'irregular' niú (< *sŋ[i sub-inverted-breve]w[schwa breve]g^{A}), are not so readily explained. The optional *(s-) may well represent an original *tś-, as appears to be the case in Tai, perhaps reinterpreted as the ubiquitous Sino-Tibetan *s- 'animal prefix'. In any event, ŋ[i sub-inverted-breve]w[schwa breve]g reflects an original *ŋu:g, apparently from an earlier *ŋuŋ(u) through dissimilation, thus tying in with the Proto-Miao-Yao root. Yao (and Miao-Yao generally) regularly has final *-ŋ for (Archaic) Chinese -g, as pointed out by Downer (1973); hence the Miao-Yao form here can be explained as a back-loan, although a direct derivation from the Austro-Tai etymon cannot be excluded. Finally, within the Kadai family, Laqua nuŋ 'ox' looks like a dissimilated form (*ŋuŋ > /nuŋ/) from the same source.

HOT WATER See STEAM/.

HOUSE P-Austro-Kadai *[d,dz]aɣan

P-Austronesian- *[d,dz]aɣan: P-Rukai *daʔanə.

P-Kadai- *C$_{i}$aɣan^{A}: P-Southern/Central Tai *rɨan^{A} (F-K. Li 1977:132, 282) (with destress > vocalic transfer); P-Northern Tai *raan^{A} (ibid.) (with simple vocalic transfer). P-Kam-Sui *(SYL)ɣaan^{A}: Sui ɣan^{H}, T'en zaan^{H}, Mak zaan^{C-h}, Maonan ya:n^{H}, Mulao ɣa:n, Kam ya:n (with vocalic transfer and perhaps variable 'high' tone < *d- or *dz-). Be lan^{A}. P-Li *rɨ:n^{A}: Hei-tu rɨ:n; Southern Li dɨən^{A}; Jia-mao lɨ, with destress > vocalic transfer, as in Southern/Central Tai. 家

HUNDRED P-Austro-Japanese *[γ,R]i(m)bəw

P-Austronesian *ribu = *[γ,R]ibu 'hundred' > 'thousand'; see MOTE.

Jp. momo, OJ mwomwo = momo, from *mbombo.

OJ -bo, as compounded in '500' and '800'.

NOTE: Dahl (1976:132) has analyzed as follows:

> Wolff has proposed to change [Proto-Hesperonesian] *libu [= *ribu] into PAN [Proto-Hesperonesian] *γibu, pointing to Jv. [= Javanese] iwu id.... It seems possible to connect the Jv. form with Kv. [= Kabalan] γasibu 'hundred' if this had had metathesis from *sa-γibu [sa- < *tsa- < P-Austronesian *ʔətsᵢa - see ONE]. It is quite possible that a primitive society of Proto-Austronesians had no need for so high a numeral as 'thousand', and that the original meaning of the word was "an extraordinarily high indefinite number." From this vague meaning it has developed into 'hundred' in Kv., and in the higher cultures of Jv. and Ml. [= Malay] into 'thousand'...

The Dahl 1976 analysis is supported by the extinct Ketagalan (Paiwanic) ḷatsibu '100' < *γasibu. The Proto-Austronesian society surely was not so 'primitive' as envisaged by Dahl, however (see 12), and the Japanese cognate firmly establishes the meaning of the P-Austro-Japanese root as '100'.

HUNGRY P-Austro-Japanese *ʔuḷay

P-Austronesian- *ʔuḷay: P-Atayalic *mu-ʔuray.

Jp. ue < *u[ḷ]ay.

NOTE: Paiwan qaulay < *qa-ʔuḷay 'dried up (fruit, vegetables)' is a likely cognate here: 'stomach without food' = 'dried up'.

I P-Austro-Tai *ʔa(ŋ)ku

P-Austronesian *Waku = *(ʔu-)aku (Dyen 1962); see 9.22 for prefixed *ʔu-.

P-Austronesian- *ʔi-aku > *yaku: P-Paiwanic *yaku: Pazeh yaku, Thao ya:ku, Saisiyat yako; Sediq yaku?; see 9.23 for prefixed *ʔi-.

P-Austronesian- *ʔaku: P-Hesperonesian *a:kuʔ = *ʔáku[ʔ] '(own up to/make my own =) admit, acknowledge' (Zorc 1981) (verbalized form, with final *-ʔ apparently to be interpreted morphophonemically; Zorc does not indicate any relationship to the pronoun).

P-Austronesian- *ʔa(ŋ)kən: P-Hesperonesian id. '(make my own =) adopt; (the adopted =) mine' (Dempwolff 1938 does not suggest any connection with the pronoun), a verbalized form incorporating the goal-focus marker *-ən (see 9.22).

P-Austronesian *aŋkən = *ʔa(ŋ)kən 'I' (Dahl 1976:122), the pronominal form.

P-Kadai *(ʔi-)aku > *yaku: P-Tai *kuu^{A} ~ *kaw^{A} (F-K. Li 1977:188, 291), from *(ya)ku (variable vocalic transfer). The kaw^{A} doublet is represented in the western Southern Tai languages as well as in Central Tai. Laqua khəu < *khu (the aspiration is unexplained). Lati: Ban Phung kui < *kaw (Robert 1913, Bonifacy 1906, the latter specifying 'poss.') ~ ku (Bonifacy 1906, specifying 'subj.'), Man P'ang ki < *k[u]i < *k[aw]; cf. the optional vocalic transfer reflected in the Tai doublet. Also Be (Handricourt 1965) yea^{B-h} < *ʔya^{B}, from *ʔi-a[ku], with distinctive development as a result of retention of the initial *ʔ- of prefixed *ʔi-; thus, *i-aku > *yaku > *kuu^{A} ~ *kaw^{A} vs. *ʔi-aku > *ʔya^{B}[ku] (note the tonal distinction). Perhaps also Gelao yah, as cited by Beauclair (1948), but the phonology here is uncertain.

P-Miao-Yao- *wa[ŋ]k[on]^{B} < *ʔu-ʔaŋkən, on the basis of the Miao doublet: (Northern/Eastern) *w[ã]^{B} (Purnell 1970:103), with the addition (from Chang 1966) of Fenghuang, Layi P'ing (both in Hunan) wẽ; She vɔŋ^{B} < *w[aŋ]^{B}; (Eastern Miao) *k[õ]^{B} < *k[on]^{B} (Purnell 1970:103, F-S. Wang 1979:102, 175).

P-Miao-Yao- *ʔyakou < *ʔi-ʔaku, on the basis of the Yao doublet: *ʔya^{A}: Chiengrai yia^{H}, Hsing-an ye^{H}, Haininh ya^{H}; also Taipan ya^{H} < *ʔya^{B}; *kou^{B}: Biao kəu.

P-Japanese-Ryukyuan *anu ~ *wanu < *(ʔu-)aŋku: OJ a- ~ wa- (enclitic forms); cf. Jp. ware ~ watakusi; Ryukyuan: Shodon, Shuri wan[u]; Yonaguni anu 'I', banu < *wanu 'we'(?); ban-ta < *wan[u]-ta 'we'. Chamberlain (1895) cites Shuri waŋ ~ (less common) wā, suggesting P-Japanese-Ryukyuan *waŋu (< *waŋku) rather than *wanu.

NOTE: See 9.22, 9.23 for a discussion of these forms, which as a group reflect a remarkable fluidity of affixation to the *?a(ŋ)ku core. It appears that in Ryukyuan, at any rate, a secondary semantic specialization took place but the details are unclear (the (?) is an addition in Martin 1979, the source of these Ryukyuan forms). For the -ta of Yonaguni 'we', cf. P-Austronesian *(k-)ita 'we (incl.)'; also Lakkia ta^{A-1} < *da^{A} 'we (excl.)', perhaps from *-nta.

IN(SIDE) P-Austro-Kadai *(n)zaya

P-Austronesian *D_2aya = *zaya 'inland' (Tsuchida 1976:240).

P-Kadai- *$(C_{ts})V_i$(n)zai^{A} < *(qa-)(n)zaya 'in/inside': P-Central Tai/P-Northern Tai *?dl/rai^{A} ~ P-Southern Tai *?nl/rai^{A} (F-K. Li 1977:129, 289) < P-Tai *?(n)za$i$ (Saek rəə^{H} < *?zai^{A}). Be lo^{A-h} (Hashimoto 1980) ~ ze^{A-h} (Handricourt 1965) < *?za$i$.

Jp. naka < *na-ka (for -ka, see PLACE/LOCATIVE^{I}), from *nza[ya], with nasal increment reflex paralleling that in Tai.

INTERROGATIVE^{I} P-Austro-Kadai *(n)dlaya

P-Kadai *$(C_t)V_i$(n)dlai^{A} < *(qa-)(n)dlaya: P-Tai *?dl/rai^{A} 'which, any' (F-K. Li 1977:129) = P-Tai *(?dl/rai^{A}: Southern Tai generally reflexes for *?d- but Khamti (doublet) and Lao for *l-; Nung (Central Tai) nai^{H} 'which' ~ nai^{L} 'who' < *(?)d[l]ai^{A}: Tho tai^{L} < *d[l]ai; P-Northern Tai *(?)(n)dlai^{A}: Dioi, Wu-ming, and Xi-lin all reflexes for *l- but Saek thrəə^{L} < *drai^{A} 'why' ~ nəə^{L} < *nai^{A} 'which, what, any' ~ nəə^{H} < *?nai^{A} 'where'; all for *(?)(n)dlai^{A}. Lakkia $n\epsilon^{B}$ < *nd[l]ay[a] 'who', na^{C} < *nd[l]a[ya] 'what; (compound) who'. Gelao: Gao n[inverted a]^{C} < *n[dl]ay[a] 'what; (compound) who, where'.

Jp. na- '(compound) wh(at)' (Martin 1979 citation); cf. nazo (~ naze) 'who, how'; nani 'what, which, some, any', from *ndla[ya], with nasal increment paralleling the widespread nasal increment in the Kadai group.

NOTE: F-K. Li 1977:131 notes that 'the Proto-Tai form is uncertain' but the occasional l- reflexes establish the initial as *(?)(n)dl- rather than *(?)(n)dr-.

INTERROGATIVE[II] P-Austro-Kadai *-nu

P-Austronesian *-nu: as variously compounded, notably in *?in$_2$u = *?inu (Dahl 1976:70), from *?i-nu (see 9.23 for prefixed *?i-) and *ts$_i$inu, well represented in the Philippines (Reid 1979) as well as in Paiwanic: Siraya hino 'where', from *tsi-nu (see 9.24 for prefixed *tsi-); also *?unu in the Philippines (Reid 1979), from *?u-nu (see 9.22 for prefixed *?u-); also P-Hesperonesian *?anu 'someone, something' but 'what' in Tagalog and some Northern Philippine languages; also Saisiyat (Paiwanic) kano < *ka-nu 'what' and P-Atayalic *kanu-wan 'when'.

P-Kadai *C$_s$V$_i$nu^A < *[tsi-]nu^A: P-Kam-Sui *hnu^A: Sui hnu 'which'; (compound) where', Kam nu^H 'which, where'.

P-Kadai *C$_s$(a)nu^A < *[tsa-]nu^A: P-Kam-Sui *naw^A: Kam nɔu, Mulao nau 'who', Sui nau 'which' (through vocalic transfer); also P-Kam-Sui *hnaw^A: Mulao hnau 'which, (compound) where', Mak nau^H 'general interrogative particle', Maonan id. '(compound) who; how many' (also through vocalic transfer, along with reflex for initial). Lakkia nu^A 'that' (cf. P-Hesperonesian *?anu [above] for the semantic development).

Ryukyuan: Shuri, Shodon, Yonaguni nuu 'what'; Shuri nū 'id.' (Chamberlain 1895).

ISLAND See OPPOSITE SHORT/.
JAW See HOLD TOGETHER/.

JUICE/WATER *P-Austro-Japanese *(m)bidźuq

P-Austronesian- *bi[dz,dž]uq: P-Atayalic biyuq 'juice'; also (Squliq dialect) 'fluid (sap of trees, etc.); honey; (compound) milk'.

Jp. mizu; OJ midu ~ mitu 'water, juice'.

KILL See DIE/.
LARVA See WORM/.

LEAF P-Austro-Kadai *paGpaG

P-Austronesian *paQ$_1$paQ$_1$ = *paGpaG (Dyen 1965).

P-Austro-Kadai- *pwa^C < *[pa]gpa[g] (secondary labialization after

velar/postvelar element): P-Kam-Sui *pwaa^{C}: Kam pa, Mulao fa, Sui wa^{H} ~ va^{H}, Maonan va^{H}, T'en waa^{H}, Mak vaa^{H}; also (Kam, Sui, Mak, T'en) '(light/leafy flat surface =) wing'.

Jp. Fa < *Fa[g]Fa[g] < *pa[g]pa[g].

Jp. Fappa < *pagpa[g] (with regular gemination reflex).

NOTE: The semantic extension to 'wing' is paralleled in P-Formosan *wasaw: Sediq wasau, Rukai: Taramakaw vasau 'leaf', but Ferrell 1969 cites Paiwan ʔasau 'leaf; wing'. Jp. Fa 'wing', however, appears to have an entirely different origin than Jp. Fa ~ Fappa 'leaf' (see BEAT/).

LEAF See SPREAD/.

LEG/FOOT P-Austro-Japanese *qaxəy

P-Austronesian *qaqəy > *kakəy: Blust 1972a sets up P-Austronesian *qaqay, based on Paiwan Batak, Aborlan Tagbanwa ʔaʔay; Bintulu aʔay; Sediq (Atayalic) qaqai, but a doublet: *qaqi is represented by Yami ʔaʔi (Ferrell 1969); Northern Philippine: Sambal ʔayi, Bolinao ʔa:yi, pointing to an earlier *qaqəy. The *q- > *k-shift (9.21) appears in the allofamic doublet, completely neglected by Blust: *kakay: Cham (mainland Hesperonesian), Thao (Paiwanic), Atayal kakai; ~ *kaki: P-Hesperonesian id., pointing to an earlier *kakəy (< *qaqəy).

Jp. asi.

LEG/STALK P-Austro-Tai *paqi

P-Austronesian *paqi: P-Hesperonesian *paʔi 'stalk; (body stalk =) thigh'. Thao (Paiwanic) pa:qi 'buttocks', Atayal paqiʔ '(grain stalks =) bran'.

P-Miao-Yao- *p[aay]^{A}: P-Miao id. 'thigh' (F-S. Wang 1979:23, 141), from *pa[q]i, with medial *-q- > [0] and compensatory vowel lengthening.

Jp. Fagi, OJ Fagyi = Fagi '(body stalk =) shank (lower leg)'.

NOTE: For the semantic association: 'leg' ~ 'stalk', see STALK/FOOT.

LEVEL See WIDE/.
LICK See TASTE/.

LIGHT/SHINE/WHITE/GRAY (HAIR) P-Austro-Kadai *[ts,tš]ilaR

P-Austronesian *t'iłaγ = *ts_{12}ila[R] 'light' (Dahl 1976:72); also (Northern Philippine: Malaweg, Itawit, Gaddang; Tsou; Paiwanic: Ami, Saisiyat, Pazeh, Thao) 'sun'; also (destressed form) Paiwan təłar 'brightness (natural)', pa-təłar 'shine upon, light up'; P-Oceanic *sina(γ) 'shine': P-Polynesian *sina 'gray-haired, white-haired'; also (East Futunan and [in Dempwolff 1938] Futuna) 'white'; also P-Polynesian *masina < *ma-sina 'moon'.

P-Kadai *$C_{ts}V_p$lan^B ~ *$C_{ts}V_p$lam^B < *îla[R]: P-Tai *hlɨan^B 'brilliant, dazzling' (F-K. Li 1977:141); also (White Tai) 'shiny, scintillating' ~ *hlɨam^B 'brilliant, shining' (F-K. Li 1977:138); also (Saek) 'shiny' and 'smooth' (both forms with destress > vocalic transfer; cf. Paiwan).

Jp. sira- 'white, gray'.

Jp. sira-ga 'white-haired, gray-haired' (-ga 'hair').

Jp. siro 'white, gray', with suffixed *-wo (9.44).

NOTE: The 'irregular' final *-r for anticipated -[0] in Paiwan suggests the reconstruction of *-R, and similarly the P-Kadai *-n ~ *-m.

LIVE/LIVING/OFFSPRING/CLAN P-Austro-Tai *qubrip

P-Austronesian *quD_2ip = *quzip 'alive' (Tsuchida 1976:168); also (Malay, Javanese) 'live', Paiwan q-m-uzi-quzip '(living being =) animal', P-Polynesian *ma?uri 'life principle': Maori mauri 'id.'; also, from the unprefixed root (not cited in Walsh and Biggs 1966), Maori uri '(the living/life-line =) offspring, relative, race'.

P-Kadai *(C_t)(u)brip < *(q)(u)brip: P-Tai *?dl/rip 'raw, unripe' (F-K. Li 1977:129, 262) = *?brip (Saek rip^H); also (Khamti) 'alive', (Shan) 'be alive, live'; Ahom lip 'unripe' ~ dip 'be alive'. P-Kam-Sui *(?)dyup 'raw, not ripe': Sui ?dyup ~ dyup^H; Mak ?dip; T'en lip^H; Maonan dip^L, from *(C_t)udup (with vocalic transfer > assimilation). Be lip^H 'raw' (Hashimoto 1980) ~ zɔp^H 'green (not dry); raw' (Handricourt 1965), from

*?d[i,u]p. P-Li *bli:p 'raw': Bao-ding vi:p; Xi-Fang γip; Tong-shen, Qian-dui, Bao-cheng fi:p; Bai-sha, Yuan-men fip; Northern Li fiep; Zhong-sha, Hei-tu ri:p; Central Li diep. Laha Noong Lay döp; Than-Uyên kthop 'alive; unripe', from *(k-)d[i,u]p. Gelao: Gao te^{C-1} 'raw', from *di[p].

P-Miao-Yao *ńem^{B} 'raw' (Purnell 1970:157, F-S. Wang 1979:95, 190), from *[qu]yemyem (with *my > /ń/) < *[qu]yepyep, showing P-Austro-Tai *br > P-Miao-Yao *y and the typical Miao-Yao final *-stop > *-nasal shift in reduplicated forms along with the regular *-i- > *e Proto-Miao-Yao shift.

P-Miao-Yao *?ńem^{A} (Miao reflexes) ~ *?yem^{A} (Yao reflexes) 'live (at), dwell' (Purnell 1970:121, F-S. Wang 1979:94, 177). Purnell cites P-Yao *yɛm^{A-h} 'located, dwell', with variable assimilation (*my > /ń/) along with a reflex (?) for SYL-1 (*qu-).

Jp. uzi, OJ udi '(the living/life-line =) clan, lineage', with semantic development similar to that of Maori.

LOCATIVE See PLACE^{I,II}

LOWLANDS/FIELD (WET)/EARTH/MUD P-Austro-Kadai *buna

P-Austronesian *buna: P-Hesperonesian *bəna 'lowlands' (with destressing). P-Paiwanic *buna: Favorlang bonna 'field (all kinds)', Paiwan vunavun '(field product =) rice seedling', from **bunabun[a]; cf. the parallel semantic development suggested for Jp. nae 'seedling' (7.24); also the infixed Paiwan form under SWAMP/.

P-Kadai *[SYL]na^{A} < *[bə]na (the destressed form, as in Hesperonesian) 'rice (wet) field': P-Tai *naa^{A} (F-K. Li 1977:111, 275). Be nia^{A} (with vocalic transfer). P-Li *[SYL]na^{C}: Southern Li, Hei-tu na; Bao-ding, Zhong-sha, Xi-fang, Bai-sha, White Sand, Yuan-men, Tong-shen, Bao-cheng ta^{L}; Qian-dui tha^{L} ~ *[SYL]na^{A}: Jia-mao tou^{L}. Laqua ne < *na. Lati: Ban Phung, Man P'ang nu < *na.

Jp. Fena 'earth, mud, clay' (the destressed form, as in Hesperonesian and Kadai).

Jp. na- as compounded in Jp. nae 'seedling' (7.24).

NOTE: The polysemy shown by this core agricultural etymon in Austro-Tai is strikingly parallel to that of EARTH/FIELD (WET).

MAGGOT See WORM/.
MEAL See EAT/.
MELON See GOURD/.
MILLET. See SWAMP/.

MORNING/MORROW P-Austro-Japanese (I) *sasu

P-Austronesian- *sasu: P-Paiwanic *sasu- 'morning': Pazeh sasunan < *sasu-n-an (with epenthetic -n-; see II for suffixed -n).

Jp. asu 'morrow, tomorrow', from *zasu.

(II) *sasu > *sasa

P-Austronesian- *sasa (with *u > *a assimilation): P-Formosan *sasa: Thao sa:sa:nu (-nu is unanalyzed); Atayal sasan, from *sasa-an (Egerod 1980:27), with referent-focus marker *-an. Egerod (1980:27) defines Atayal -an as 'Forms nouns indicating place and time'.

Jp. asa 'morning', from *zasa.

MORTAR P-Austro-Japanese *lutsuŋ

P-Austronesian *luts$_1$uŋ: P-Hesperonesian *lət'uŋ = *lut'$_1$uŋ ~ (destress doublet) *lət'$_1$uŋ, with Tagalog, Cebuano, and several Northern Philippine languages maintaining V_1 = /u/. P-South Formosan *ɬusuŋ = *luts$_1$uŋ (Tsuchida 1976:128), with V_1 = /u/ well maintained in both Tsouic and Paiwanic; P-Atayalic *luhuŋ < *luts$_1$uŋ.

Jp. usu.

MOTHER/AUNT P-Austro-Kadai *papa

P-Kadai *[SYL]pa^B < *[pa]pa: P-Tai *paa^B 'aunt (parent's older sister)' (F-K. Li 1977:61, 275) = 'the surrogate mother'. Lakkia pa^B 'mother; (compound) aunt (father's older brother's wife/mother's brother's wife)'.

Jp. FaFa, OJ Fa ~ FaFa 'mother'.

Jp. oba, OJ woba 'little (wo-) mother (-ba)' = 'aunt'.

MOUNTAIN/HILLOCK P-Austro-Japanese (I) *ļu[t,C]uk

P-Austronesian- *ļu[t,C]uk: P-Paiwanic- id. 'mountain': Ami ļotok (Ogawa and Asai 1935).

Jp. tuka < *tuk-a 'hillock, tumulus, mound', with suffixed *-a (9.41).

(II) *ļu[t,C]uk > *[t,C]uk[t,C]uk

P-Austronesian- *[t,C]uk[t,C]uk: P-Hesperonesian- *tuktuk 'summit': Tagalog tuktok, Bikol ʔali-tuktuk; Northern Philippine: Kapampangan, Botolan, Sambal, Bolinao, Pangasinan, Ifugao, Inibaloi, Manabo, Ilocano, Itawit tuktuk; Ivatan tu:tuk.

MOUTH P-Austro-Tai *gu(ń)dźuy

P-Austronesian- *ŋu[d,dz$_2$]uy < *gun[d,dz$_2$]uy (with *g > *ŋ assimilation): P-Rukai *ŋodoy.

P-Miao-Yao *(ń)dźuy^A (Purnell 1970:131, F-S. Wang 1979:25, 122): P-Yao initial *dz- < *ndz- but P-Miao *ńj-, reflecting P-Miao-Yao *ńdź-; from *[g]uńdźuy (with vocalic transfer, also *u - u > *u as regular shift).

Jp. kuti ~ (compound) kutu-, from *kutï < *kutui.

NOTE: See 7.53 for reconstruction of the medial affricate here.

MOVE (FEET)/STEP P-Austro-Japanese *la(ŋ)kaq

P-Austronesian- *[l,ļ]a(ŋ)kaq: P-Hesperonesian *laŋkaʔ 'step' (v.), P-Polynesian *laka 'go/step'; also (cited by Walsh and Biggs 1966 under above) Tikopian lakalaka 'move quickly'.

Jp. agak-i 'move feet; paw (ground, air)'.

MUD See EARTH (SOIL)/, LOWLANDS/.

NAME P-Austro-Tai (I) *ʔa(ń)ja(-n)

P-Austronesian *-ajan = *ʔa(ń)ja(-n) (Tsuchida 1976:224), apparently incorporating the referent-focus marker *-an, on the basis of the mainland (Kadai) evidence.

(II) *ʔa(ń)ja(-i)

P-Kadai *C_iV_p(ń)ja(-i)^C, with suffixed *-i probably representing the referent-focus marker *-i: P-Tai *jɨɨ^C (F-K. Li 1977:169, 265), from *jya (with vocalic transfer). Be noi$_b^{C-h}{}_c$ < *ʔńjai. Gelao: Gao ntsai^{A-1} < *ʔńjai.

Jp. 名前 na ~ (compound) -ne, in Jp. kaba-ne 'clan name' (see CLAN/), from *nai.

NOTES

1. The Gelao: Gao initial nts- is described as rare, corresponding to nt-in other dialects (no other examples are cited). It represents an anomaly of sorts inasmuch as the regular Gao shifts: *m- > mp-, *n- > nt-, *ń- > ńc-, and *ŋ- > ŋk- appear to preclude nts- as an initial. The comparative evidence here, however, suggests a development from *ńj-, as reconstructed above.

2. Jp. *nai, with ambiguous final reflex, is derivable from a root in final or suffixed *-n as well as one in suffixed *-i; it is grouped above with Austronesian because of the closer affinity with that family. The evidence as a whole for this root provides a solid basis for setting up the twin referent-focus markers (or their equivalents) *-an and *-i at an early (Proto-Austro-Kadai) level.

NAVEL P-Austro-Japanese *putsəj

P-Austronesian- *puts$_1$əj: P-Hesperonesian *put′əj = *put′$_1$əj ~ (destress doublet) *pət′$_1$əj (Yami).

Jp. Feso (with destressing, as in Yami).

Jp. Fozo (with destressing and secondary voicing).

Jp. toboso, OJ twobosö = tobosö 'door (to-) navel (-bosö)' = 'pivot; door' (Martin 1979 citation).

NEPHEW See GRANDPARENT/GRANDCHILD ~.

NEST P-Austro-Japanese *lisuk

P-Austronesian- *lisuk: P-Rukai (Paiwanic) *lisuku (with -u 'echo vowel').

Jp. su.

NIBBLE See TASTE/.

NIGHT/EVENING P-Austro-Japanese *[γ,R]abiʔi

P-Austronesian *γabiʔiH_2 = *γabiʔi 'night, evening' (Tsuchida 1976:183): P-Hesperonesian *γabi ~ (destress doublet) *γəbi (Toba-Batak).

Jp. yoi, OJ yöFyi = yöFi 'evening' (with destressing, as in Toba-Batak).

NOISE/FART P-Austro-Kadai *qo(n)tot

P-Austronesian *qə(n)tut = *qu(n)tut ~ (destress doublet) *qə(n)tut 'flatus ventris' (Tsuchida 1976:172).

P-Kadai *[SYL]trot < *[qo]t-r-ot 'id.' (with *-r- infix): P-Tai *tlot = *trot (F-K. Li 1977:118), with irregular vowel reflexes in Central Tai/Dioi (-a-) and Saek (-e-), apparently as an effect of the infixation. P-Kam-Sui *tr[o]t: Kam, Sui, Maonan, tət; Mak tut; Mulao kγət, with irregular vowel reflexes as in Tai. Lakkia kyot < *trot. Be dut^{H} < *t[ro]t. P-Li *[tro]t: Southern Li thuot; Bao-ding, Zhong-sha, Hei-tu, Tong-shen, Qian-dui, Bao-cheng thu:t; Xi-fang, White Sand, Bai-sha, Yuan-men thut; Jia-mao duət.

Jp. 音 oto; OJ ötö 'sound, noise'.

NOTES

1. In view of the widespread merging of initial *t- and *tr- (F-K. Li 1977: *tl-) in Kadai, it is uncertain whether all the cited forms have descended from the infixed root. The vocalism shows marked irregularity throughout, perhaps the result of infixation, and it is possible that a doublet root in final *-ut will eventually be required; in any event, the Jp. /o/ < OJ /ö/ reflex establishes the medial *o at the Proto-Austro-Kadai level.
2. For the semantic development in this root, cf. Jp. onara 'little (o-) sound (-nara)' = 'fart'.

NORTH See ABOVE/.

OFFAL P-Austro-Japanese *[ts,tš]aRap

P-Austronesian- $*ts_{123}a\gamma əp$: P-Hesperonesian $*t'a[r]əp = *t'_{12}a\gamma əp$ (Ngadyu Dayak -h- reflects only *-γ-) 'offal, refuse' (with destressing).

Jp. ara 'offal, chaff, garbage, fish bones', from *zara.

ONE P-Austro-Kadai *ʔitsa

P-Austronesian *əsa (~ *isa) = $*ʔits_1a$~ (destress doublet) *ats,a (Tsuchida 1976:128).

P-Austronesian $*ts_1a$- '(compound) one', widespread in Austronesian in '10', '100', and '1,000', e.g., Yogad (Northern Philippine) ta- (< *tsa-): ta:fulu '10' (P-Hesperonesian *pulu?), ta:gatut '100' (P-Hesperonesian *γatut'), ta:ribu '1,000' (P-Hesperonesian *ribu ~ *γibu).

P-Kadai- *tsia (variable tone) < *[ʔ]itsa (with vocalic transfer): P-Li *tsɨ^{C} (< tsya^{C}): Yuan-men tsɨ^{C} 'one' ~ 'classifier'; Bao-ding, Bai-sha id. 'classifier'; Xi-fang tsɨ^{B} 'id.' (tone influenced by ff.) ~ *tshɐɨ^{B} (< *tshyia^{B}): Bao-ding, Bai-sha tshɐɨ^{B}; Xi-fang tshei^{B} 'one'. Laqua tiə; Pupeo cya; Laha: Than-Uyên, Ban Pung, Noong Lay cam < *tsiam (with suffixed -m). Lati: Ban Phung tiam (Robert 1913) ~ cam (Bonifacy 1906), Man P'ang tiam (with suffixed -m); Gelao si (Clarke 1911); Gao si^{A}; Thü tsi; from *ts[ia]^{A}.

P-Miao-Yao *ʔ[əi]^{A} (Purnell 1970:143, F-S. Wang 1979:120, 123), from *ʔət[sa], the destressed form (as in Proto-Austronesian).

OJ -swo = -so '(compound) 10' (miso '30', yaso '80'), from *sao < *sawo < *tsa-po[loxot] (see TEN), precisely paralleling the compound in Yogad (above) et al.

Jp. Izanaki < Iza-na-ki 'first/primordial (Iza-) subord. part. (-na-) ancestor (-ki)' = 'Creator' (mythic name) (with secondary voicing) (for -ki, see GRANDFATHER/) ~ Izanami < Iza-na-mi 'Creatress' (for -mi, see FEMALE/).

NOTE: Jp. too, OJ töwo '10' appears to parallel OJ so- < *sawo (with destressing), but to explain the initial t-, a doublet Proto-Austro-Kadai root: *ʔitša would have to be reconstructed or an early (Old Japanese level) dialectal *ts > /s/ ~ /t/ recognized.

ONE/ONE OF A PAIR P-Austro-Japanese *pitroŋ

P-Austronesian- *pi[t.]oŋ: P-Hesperonesian id. 'one-eyed'.

Jp. Fito, OJ Fyitö 'one'.

NOTE: This appears to have been the basic Austro-Tai root for 'one of a pair', the semantic expansion in Japanese following the specialization of the general root for 'one' (see ONE). The root seems to have been represented on the mainland in the ancient Austro-Tai language that provided early loans to Chinese, cf. [Chinese character #5170] p'[i sub-inverted-breve]$_{k}$t (< *pit) 'one of a pair', a form that is isolated in Sino-Tibetan.

OPEN/FORCE OPEN P-Austro-Japanese *piḷak

P-Austronesian- *piḷak: P-Malayo-Polynesian *piḷak 'force open'; also (Sasak) 'open' (v.) (Blust 1980a).

Jp. Firak-i 'open, uncover; clear (land)'.

OPEN(ING) See WIDE OPEN/.

OPENING/ANUS/VAGINA P-Austro-Kadai *tu(m)buŋ

P-Austronesian *tu(m)buŋ: P-Philippine *tumbuŋ 'anus': Tagalog tumboŋ; Northern Philippine: Bolinao, Pangasinan tumbuŋ. Atayalic tubuŋ '(wall opening =) window'.

P-Kadai- *$(C_t)(V_i)$(m)buŋ^B < *[tu](m)buŋ: P-Tai *muŋ^B '(animal hole =) den/lair'; also (Shan) 'womb', Nung 'room': Shan, Lao, White Tai, Nung muŋ; Dioi mɔŋ; also P-Southern Tai- *ʔbuŋ‖: Ahom buŋ 'hog's den'; cf. also White Tai buŋ$^{A-h}$ '(stick into a hole =) transplant'.

Jp. tubi, OJ tubï 'vulva' (in Ōno et al. 1982 under heading: 'opening'), from *tubui.

Ryukyuan: Shuri śibi, Yonaguni nbi (< *tubi) 'arse' (Martin 1979 citation/reconstruction), a semantic extension of 'anus'.

NOTE: This root is an allofam, with V_1 = /u/ as the distinctive feature, of the widespread root under BORE/.

OPPOSITE SHORE/ISLAND P-Austro-Japanese *si(m)pa[r,R]

P-Austronesian *S_6i(m)pa[r,γ] = *si(m)pa[r,γ] 'opposite shore' (Tsuchida 1976:160).

Jp. sima 'island'.

OUTSIDER/ENEMY P-Austro-Japanese *qa[t,C]a

P-Austronesian- *qa(γ)[t,C]a: P-Malayo-Polynesian *qa(γ)ta 'outsiders, alien people'; also (Sambal [Philippine], Banggai, Mori [Celebes], P-Ambon, Bimanese) '(captured enemy =) slave', (Manggarai [Flores]) 'person; other people, outsiders', (Ngadha [Flores]) 'human being; enemy'.

Jp. ada, OJ ata 'enemy'.

NOTE: This Proto-Malayo-Polynesian etymon was ingeniously put together by Blust (1972b), published along with a note by Haudricourt (1972) plus an editorial comment on the Canala cognate: ka < *qa[ta] 'enemy, one to be killed and eaten' (see 5.1 for the Japanese-like canonical reduction-right). The analysis follows that of Blust, whose reconstructed gloss: 'outsiders, alien people' accounts for the polysemy within Malayo-Polynesian: 'man/human being' ~ 'enemy' ~ 'slave'. The Japanese gloss also fits well here; note that if the Proto-Austro-Japanese gloss were set up as 'enemy', one would hardly be able to account for the Malayo-Polynesian extension to 'human being'.

PAIR/TWENTY P-Austro-Japanese *patśaŋ

P-Austronesian- *pats$_{123}$aŋ: P-Hesperonesian *pat'$_{12}$aŋ 'pair'.

OJ Fata '(pair of 10's =) 20'.

PEAK/MOUNTAIN/BREAST P-Austro-Tai *(m)bu((m)bu)

P-Austronesian- *(m)bu((m)bu): Atayal: Squliq bubu? 'breast', bu? ~ bə?bu? (with destressing) 'peak'; Kanakanabu (Tsouic) mumu < *mbumbu 'breast'.

P-Kadai- *bu^{A}: P-Southern/Central Tai *buu^{A} 'mountain' (F-K. Li 1977:66, 267).

P-Miao-Yao- *b[ou]^{B}: P-Miao id. 'mountain' (Purnell 1970:131, F-S. Wang 1979:25, 122).

Jp. Fumoto, OJ Fumötö 'foot (-mötö) of a mountain (Fu-)'.

Jp. mune 'chest/breast', from mu- (< *mbu-) + ne (see Note 1).

NOTES

1. Jp. -ne appears to stand for 'ridge [of the sternum]', as found also in mine 'peak, summit; back of a sword', a possible allofam of Jp. mune (see 6.3); cf. also yane 'roof' (ya 'house'), hane 'wing' (ha 'feather'), sune 'shank' (the crest of the tibia), perhaps even Fune 'boat' (the keel); cf. also une 'ridge (in field)', with u-representing SYL-I or perhaps prefixed *?u- (see 9.22). It is a possible cognate (-ne < *-nai) of P-Yao *hnan^{B} = *hnaan^{B} 'elevated' (Haudricourt 1954) and/or Yao: Mun: Haininh *naan^{C-h} < *?naan^{C} '(elevation/ridge =) scar'; cf. also Lakkia (Kadai) *nɛ:n^{B-h} < *?naan^{B} 'breast', with semantics as in root above.

2 .The 'peak/mountain' ~ 'breast' semantic association appears also in P-Austro-Tai *nuh(nuh): P-Austronesian *nunuH$_{1}$ = *nunuh 'breast; milk' (Tsuchida 1976:229). P-Kadai *(C$_{ta}$)(V$_{i}$)nu$^{A/B}$ < *[nu]hnu[h]: P-Southern Tai *?hnu^{B} 'breast': Lao, White Tai nu^{H}; P-Kam-Sui- *nu^{A}: Sui nu 'mountain'. P-Miao-Yao- *nu^{A}: Yao: Mun: Haininh nu 'breast; milk'.

PECK P-Austro-Japanese (I) *pa(n)tuk

P-Austronesian- *pa(n)[t]uk: P-Hesperonesian id. 'peck'; also (Javanese) 'beak'.

(II) *pa(n)tuk > *tuktuk

P-Austronesian *tuktuk 'beak of a bird; peck' (Blust 1980a).

Jp. tutuk-i 'poke (at), pick (at), peck'.

NOTE: This root shows widespread semantic merging, especially in Formosan, with the (possibly related) root under POUND (see - Note).

PENIS See VULVA/.

PENIS/VULVA P-Austro-Japanese *bo[t,C]oq

P-Austronesian- *bu[t,C]uq: P-Hesperonesian *butu? 'penis'; also (Cebuano [Philippine]) 'vagina'.

Jp. Foto, OJ Fotö 'vulva'.

NOTE: For the semantic development, cf. VULVA/PENIS; also P-Austronesian *qutil: Puyuma (Paiwanic) qutil 'penis', Kanakanabu (Tsouic) utin 'id'; P-Malayo-Polynesian *?uti = *?utin 'id.'; Northern Philippine: Inibaloi ?u:tin 'vagina'. These involve the interplay of specifically paired antonyms, as in 'bow-and-arrow' switching, with one instance (Sino-Tibetan: Karen) of a complete 'genital flipflop' (Benedict 1979b). In the case of P-Austro-Japanese *bo[t,C]oq (above), the basic shift appears to have been from 'penis' to 'vulva', with Japanese and Cebuano showing parallel developments, although in theory one might argue for an 'epicene' gloss at the Proto-Austro-Japanese level.

PIERCE See BORE/.

PILE UP See COLLECT/.

PLACE/LOCATIVE[I] P-Austro-Kadai *ka

P-Austronesian *ka: Northern Philippine: Malaweg, Isneg ka 'locative particle'; P-Philippine *ka ni 'personal locative determiner'

(Reid 1979); Yami ka- '(compound) right; left'. P-Paiwanic *ka- '(compound) right; left (Paiwan, Puyuma, Kabalan, Favorlang, Ami, Saisiyat); also (Puyuma, Rukai) 'here; there', (Ami, Saisiyat) 'down/under', (Ami) 'up/above', P-Tsouic *ka-: Saaroa ka- '(compound) here; there'; Atayal: Squliq ka ~ ka? 'that, there... yonder'.

P-Kadai- *ka$^{B/C}$: P-Southern Tai- id.: Ahom ka 'at, behind, after; (compound) below', Khamti ka 'until; (compound) above; below', Shan ka^{B} 'a place; to, at, from', Black Tai ka^{C} 'at, on', Lao ka 'to the place, at'. P-Kam-Sui *ka^{C} 'that': Maonan ka, Mulao ka^{L}, Kam ka$^{H/L}$, Sui tsa, with secondary voicing in Kam and Mulao.

Jp. -ka 'place' (Martin 1979 citation); cf. naka < na-ka 'inside' (see IN(SIDE)); also ari-ka 'be place' = 'location'; sumi-ka 'live place' = 'residence'.

OJ ka 'that (at a distance)'.

NOTE: For the semantic association 'that' ~ 'place/locative', cf. PLACE/LOCATIVE^{II}. The same association also appears in Sino-Tibetan and Tibeto-Burman, involving a proto-morpheme of the same shape (*ka ~ *ga) (Benedict 1983b). In Burmese it is represented by the topic marker -ká and it is likely that the Proto-Austronesian morpheme is similarly represented in Paiwanic by Pazeh, Rukai ka 'topic marker' (P. J-K. Li 1978b:577).

PLACE/LOCATIVE^{II} P-Austro-Tai (I) *-ti

P-Austronesian *-ti: Philippine: Mangyan group (Zorc 1974): Mangyan base *ti for 'most remote', Pampango id. for 'nearness', Sambal -ti for 'proximate locative', Palawanic *ti 'remoteness'; also as compounded in *ʔiti < *ʔi-ti: P-Malayo-Polynesian *(ʔi)ti, cited in Blust 1980a as doublet of *ʔidi (see II): Ami (Paiwanic) ʔiti- '(compound) here; there', with P-Philippine *ʔi- glossed by Reid 1979 as 'locative marker' (but see 9.23); also Paiwan t'i-a- (< *ti-) 'be or remain at' (-a- is 'frozen infix').

P-Kadai *[SYL]tee^{A} < *[prefix]ti-a (see 9.42 for suffixed *-a): Central Tai/Northern Tai *tee^{A} 'he, that' (F-K. Li 1977:98).

P-Miao-Yao *t[ia]^{C}: Yao: Mun: Haininh ti 'place', from *ti-a (cf. Kadai).

Jp. ti- 'road/path', as compounded in ti-mata 'road (ti-) fork (-mata)' = 'crossroads' (Martin 1979 citation).

Jp. miti 'road/path', OJ id., also 'direction', from mi-ti, with honorific mi- (see GOD/) = 'the way of the gods'.

(II) *-(n)ti > *-(n)di

P-Austronesian *di: P-Hesperonesian *di 'locative particle'. P-Paiwanic *di: Pazeh di 'particle before noun; directional or locative marker; (compound) here; there', Saisiyat ri- (< *di-) 'here; there'.

P-Austronesian *-(n)di, as compounded in P-Malayo-Polynesian *idi = *ʔidi 'that, there (3rd person deictic)', as glossed in Blust 1980a, but note Moken idi 'here, hither', Tagalog ir[i] 'this', and Formosan cognates: P-Paiwanic *ʔindi: Favorlang inzi- '(compound) this; here', Bunun ʔindin 'this' (with suffixed -n).

P-Kadai- *di$^{B/C}$: P-Tai *dii^{C} 'place, spot, ground' (F-K. Li 1977:104). Lakkia tei $^{B-1}$ na^{C} 'what (na^{C}) place (tei^{B-1})' = 'where', from *di^{B}-.

Jp. ni < *ndi 'locative particle'.

NOTES

1. P-Austronesian *ʔi- 'locative marker' can be set up on the basis of P-Philippine *ʔi- (see under I); Malagasy i- 'demonstrative prefixed to locative forms beginning in a-' (Dahl 1976); P-Paiwanic *ʔi-: Paiwan i 'be at, in (place)', Thao ʔi 'locative marker' (P. J-K. Li 1978a), Puyuma i 'id.' (Tsuchida 1980), Favorlang a-i 'this' (cf. a-icho 'there'). In addition, the mainland evidence suggests that a similar element can be reconstructed at the Proto-Austro-Tai level; cf. Southern Tai: Lao ʔiʔ 'here'.

2. This etymon furnished an early loan to Chinese: Archaic Chinese [Chinese character #6198] d'ia^{C} (< *di^{C}) 'earth, ground', with irregular Middle Chinese d'i^{C} 'id.', also 'position'. Note the tonal agreement with Tai, typical of these early loans, suggesting that back-loans are involved in at least some cases. The early (and only Archaic Chinese) gloss for the Chinese loan is 'earth/ground' and P-Kam-Sui *dii^{C} 'earth': Kam, Sui, Maonan, Mulao ti^{L} must be viewed as a back-loan from this source. Yao: Mun tei^{C-1} (< *di^{C}) '(compound) country; waste land' is clearly of the same nature'.

3. The polysemy shown by this root is precisely paralleled in Tibeto-Burman: P-Tibeto-Burman *lam^{B} 'road/way', also (Rawang) 'side, direction', (Lushai) 'way, pathway, direction, place; (compound) road'; P-Karen *lam^{B} 'place, track' (Benedict 1972).

PLAIN/CLEARING (IN WOODS)/FIELD (DRY) P-Austro-Japanese *pa(n)daŋ

P-Austronesian- *pa(n)daŋ: P-Hesperonesian id. 'flatlands, steppe, plain': Malagasy fandra 'plain' ~ fantrana 'free place in the woods, clearing'.

Jp. Fata '(clearing =) (dry) field'.

PLAIT P-Austro-Japanese *[q,ʔ]ańam

P-Austronesian- *[q,ʔ]ańam: P-Malayo-Polynesian *ʔańam 'plait' ~ (destress doublet) *ʔańəm 'plait, braid' (Blust 1980a).

Jp. am-i 'plait, knit, braid, weave', probably from an assimilated form: *ʔamam.

PLANT (v.) P-Austro-Kadai *[ts,tš]uwan

P-Austronesian *ts_{123}uwa[n,l]: P-Malayo-Polynesian *t'uwan = *t'_{12}uwan 'digging stick'; also (Toba-Batak) 'plant' (v.).

P-Kadai- *$suwan^{A}$ '(planting/planted place =) garden': P-Southern Tai *$suan^{A}$ (F-K. Li 1977:164, 284), P-Central Tai *$suun^{A}$ (ibid.) (with *a > *u assimilation), P-Northern Tai *$s\ddot{i}n^{A}$ (with destressing > *a > *ɨ assimilation). P-Kam-Sui *$swyaan^{A}$: T'en $wyaan^{H}$, Sui fyan ~ hyan ~fiən, Mak fiin (palatalized).

Jp. ue-ri, OJ uwe- 'plant' (v.), from *zuwai-.

Jp. sue-ri, OJ suwe- 'set, place, put in position', from *suwai (doublet without secondary voicing).

POUND P-Austro-Japanese *truk(truk)

P-Austronesian *[t.]uk ~ [t.]uk[t.]uk: P-Malayo-Polynesian id. 'knock'; also (Fijian) 'drum, hammer' (v.); Wolio tuktuk-i 'pulverize' (Blust 1978); P-East Oceanic *tuk-i 'pound'; P-Polynesian *tuki < *tuk-i 'strike'; Saaroa (Tsouic) t-um-a-tuuku 'pound into pieces' (with -u 'echo vowel'); Rukai: Mantauran tukutuku 'id.'.

Jp. tuk-i 'pound (rice), hull (barley)'.

NOTE: This root shows widespread semantic merging, especially in Formosan, with the root under PECK, with Wolio, Tsouic/Rukai, and Japanese perhaps retaining a basic meaning of 'pound into pieces'. It may, in fact, represent simply an *-r- infixed form of that root.

POUND See BEAT/, HIT/.
POWER (DIVINE) See SPIRIT/.
PRONOMINAL (3rd) See THAT/.

PUS P-Austro-Kadai *ʔumuq

P-Austronesian- *ʔumuq: Paiwan (Paiwanic) umuq 'pus'.

P-Kam-Tai- *C_i(u)muk: P-Tai *mu(u)k '(nose-pus =) mucus' [= 'snot'] (F-K. Li 1977:72, 267) (with variable vocalic transfer).

Jp. um-i 'fester', with loss of *-q after *u - u (7.14).

Jp. umi 'pus' (nominalized).

RASH (SKIN) P-Austro-Japanese *gušam

P-Austronesian *guS$_2$am = *gušam 'skin disease' (Tsuchida 1976:227): P-Hesperonesian *guham 'skin eruption'.

Jp. kusa 'eczema, rash'.

REBEL/BATTLE P-Austro-Japanese *[s,š]amuk

P-Austronesian *[s,š]amuk: P-Hesperonesian *hamuk 'run amok'; also (Tagalog) 'battle'.

Jp. somuk-i, OJ sömuk-i 'go against, rebel' (with destressing).

RECITE/CHANT P-Austro-Japanese *[q,ʔ]ucap

P-Austronesian *[q,ʔ]ucap: P-Hesperonesian *ʔucap 'speak, converse'; also (Malay) 'recite', (Javanese) 'enumerate (= recite) good deeds'.

Jp. uta '(recital =) song, poem'.

Jp. uta-i, OJ utaF-i 'sing, chant, recite'.

REED/SUGARCANE P-Austro-Kadai *tobos

P-Austronesian *təbus$_{12}$ = *təbus 'sugarcane' (Tsuchida 1976:151).

P-Kadai- *$C_t$ooy^B < *[t]o[w]oy < *[t]o[b]oi: P-Tai *ʔooy^B 'sugarcane' (F-K. Li 1977:244) (with regular *-b- > *w and *-s > *-i shifts). P-Kam-Sui *ʔooy^B 'id.': Sui ʔoi ~ ʔui, Mak ʔoi, Maonan u:i, Southern Li oi^C 'maize'.

P-Kadai- *C_to^B = *C_too^B < *[t]o[w]o: P-Tai *?oo^B 'kind of reed' (F-K. Li 1977:244) (doublet with final *-s > [0]).

Jp. ogi, OJ wogï 'reed; sugarcane', from wo- + -gï = kï 'tree' (gloss and analysis from Martin 1979).

NOTE: For 'sugarcane' ~ 'maize' in Kadai, cf. P-Hesperonesian *pajay 'rice plant'; also (Malagasy) 'sugarcane'.

RETURN See TURN/.

RIBS P-Austro-Japanese *baRaŋ

P-Austronesian- *baγaŋ: P-South Formosan *ba[r,γ]aŋ = *baγaŋ (Tsuchida 1976:280). The medial is disambiguated by Kabalan baγa:iŋ, Thao fa:ɬan (not cited in Tsuchida 1976).

Jp. abara < *a-bara (with body part prefixed *qa-).

RICE P-Austro-Japanese *krumay

P-Austronesian- *[C,s]umay: Pazeh (Paiwanic) sumai ~ somai 'cooked rice'; also the *-l̤- ~ *-l- infixed forms with canonical reduction-left: Puyuma l̤umai 'rice plant; husked rice', Paiwan rumai ~ lumai 'barnyard millet (*Panicum crusgalli*)' (Tsuchida n.d.) ~ ɬumay 'id.' (Ferrell 1982) and the re-infixed Rukai/Tsouic root: *ɬ-al-umay = *l-al̤-umay 'id.' (ibid.).

Jp. kome 'rice', OJ kömë 'rice; rice plant', from *kəmai (with destressing).

Jp. kuma 'rice offering to the gods', kumasine 'polished rice (-sine) offering to the gods, washed rice' (with canonical reduction-right, without destressing).

NOTES

1. The initial of this root, reflected in Austronesian only in Pazeh, is disambiguated by the Jp. *k- < *kr-, yielding P-Paiwanic *C-, as in the closely parallel root for BEAR (both the Pazeh and the OJ [kuma] cognates for the two roots are homophonous).

2. Ami həmai, Kabalan ?əmai ~ ?mai 'cooked rice' belong in a different cognate set from P-Austronesian *šimay ~ (destress doublet) šəmay; cf. P-Hesperonesian *?imay: Malay ?imai 'cooked rice', Toba-Batak ?ame (with destressing) 'rice in the husk'; Northern Philippine: Isneg, Ibanag, Itawit, Malaweg ?əmay 'rice plant'. Blust (1976b)

reconstructs simply P-Austronesian *Səmay = *səmay, with an 'unexplained' *ə > /i/ shift in Malay and even includes the Pazeh form, which is discrepant both for initial (s- for the anticipated *h-, corresponding to Ami h-) and for vocalism (/u/ for the anticipated *i or *ə). The early (Proto-Austro-Tai) loan into Sino-Tibetan (> Modern [pinyin] [Chinese character #4446] mi) as well as the Yao cognate (or back-loan) point to *śiməy at the Proto-Austro-Tai level.

RICE See SWAMP/.

RICE/COOKED RICE^{I} P-Austro-Tai *śinaŋ

P-Miao-Yao *hn[ ]^{C} = *hnaaŋ^{C} 'rice (cooked)' (Purnell 1970:162), from *[s]naŋ < *s*n*aŋ.

Jp. ine ~ (compound) ina- 'rice plant', from *yinai.

Jp. -sine '(compound) rice': uru-sine 'non-glutinous rice', kuma-sine 'polished rice offering to the gods' (see RICE), from *-sinai.

Jp. yone, OJ yöne 'unhulled rice', from *yənai (with destressing).

RICE/COOKED RICE^{II} P-Austro-Japanese *mami

P-Austronesian- *mami: Atayal mami? 'cooked rice'.

Jp. momi 'hulled rice' (with destressing).

RIGHT (ON THE MARK) See HIT (MARK).

RISE/UP/HIGH/EAST P-Austro-Kadai (I) *tśaka

P-Austronesian- *ts$_{123}$aka: P-Hesperonesian- *t′$_{12}$aka: Cebuano saka 'climb'.

P-Kadai- *kha^{C} < *[sa]ka (secondarily aspirated by the *s- < *ts-): P-Kam-Sui *tshaa^{C} < *khaa^{C} 'ascend (mountain)': T'en tshaa; Mulao tsha; Kam cha; Mak saa; Sui, Maonan sa.

P-Kadai- *khaan^{A} < *[sa]ka-an (with secondary aspiration, as above, and suffixed *-an, corresponding to the referent-focus marker of Austronesian, here paralleling the referent-focus marker *-i that appears in Austronesian - see II): P-Li *khaan^{A} 'ascend (mountain)': Northern Li, Tong-shen, Bao-ding kha:n.

Jp. taka- 'high'.

Jp. Figasi < Fi-ga-si 'sun (Fi-) rise (-ga-) wind/direction (-si)' = 'east', from *[ta]ka (with secondary voicing in compounds); cf. -si in Jp.

nisi 'west' (under DOWN/); see BLOW - IV for the etymology; cf. also the winds = directions in Austronesian under BLOW (FAST)/.

(II) (ń)tśaka-i

P-Austronesian- *(n)ts$_{123}$akay < *(n)ts$_{123}$aka-i (incorporating the referent-focus marker *-i): P-Hesperonesian- *t'akay = *t'$_{12}$akay 'climb/mount': Cebuano sakay 'ride a vehicle'. P-Eastern Oceanic *(n)sake 'upwards'; P-Polynesian *hake < *nsakay 'up, upwards': Tongan hake 'upwards', hahake (partial reduplication) 'east'; Samoan a?e < *hake 'upwards', also sa?e < *sake < *sakay (without nasal increment) 'lift',, sasa?e (partial reduplication) 'east'.

Jp. take, OJ takë 'height', from *takai < *taka-i (nominalized form with -i).

(III) *tśaka-t

P-Austronesian- *ts$_{123}$akat < *ts$_{123}$aka-t (incorporating suffixed *-t): P-Hesperonesian- *t'$_{12}$akat: Bikol sakat 'climb'.

Jp. kat-i '(rise above =) surpass, prevail, win' ~ kati 'victory', from *[ta]kat (incorporating suffixed *-t).

ROAST See COOK/.

ROOM/STALL P-Austro-Japanese *baγa

P-Austronesian- *ba[r,γ]a: P-Hesperonesian id. 'stall/stable'.

Jp. Feya 'room' (with destressing).

ROOT P-Austro-Japanese *?a(ŋ)kaz

P-Austronesian- *?akaz: P-Malayo-Polynesian *2aka[r] = *?akaḍ ~ *waka = wakaḍ (Dahl 1976:51), the latter with prefixed *?u- > w- (see 9.22).

Jp. ne, from *në < *nai < *ŋkai.

ROUND P-Austro-Kadai *(m)baḷuR

P-Austronesian- *bəḷuγ: P-Hesperonesian (with destressing).

P-Kadai- *C$_t$V$_i$[bl]uaŋ^A < *-baluŋ (with vocalic transfer) < *-balu[R]: P-Southern Tai- *?duaŋ^A 'round, globular; classifier for objects

of this shape': Siamese duaŋ^{H}, Lao duoŋ^{H}, White Tai doŋ^{H}, Black Tai luoŋ^{H}.

Jp. maru 'round thing, circle'.

Jp. maro 'circle', from *maru-wo (with suffixed *-wo).

Jp. mari (accent 3) 'ball', from *marï < *marui < *maru-i (with suffixed *-i).

Jp. mari (accent 2) '(rounded out utensil =) bowl', from *marï < *marui < *maru-i (doublet of above).

ROW (BE IN) P-Austro-Japanese *(n)[t,C]arap

P-Austronesian- *[t,C]arap: P-Malayo-Polynesian *ta[r]ap = *tarap 'row': Javanese tarap 'in a long row', Fijian tarav-a '(go in a row =) precede; follow'.

Jp. narab-i 'be in a row, line up'.

NOTE: A 'corrected' P-Malayo-Polynesian *ta[r,γ]ap is cited in Dempwolff 1935, but Fijian (P-Malayo-Polynesian *γ > Fijian [0]) disambiguates for the medial *-r-.

SALIVA See SPITTLE/.

SAND P-Austro-Japanese *xunay

P-Austronesian *qən[a,ə]y = *qunay ~ (destress doublet) qənay (Tsuchida 1976:172): generally *qənay but V_1 = /u/ maintained in Rukai: Mantauran hunae (Ogawa and Asai 1935).

Jp. suna, from *sunai (with canonical reduction-right).

SAP See FLUID/.

SEA P-Austro-Japanese *wacal

P-Austronesian *wacal: P-Paiwanic *waCal: Saisiyat wasal 'sea', wasawasal 'lake/pond'; Paiwan vatsaɬ 'deep pool; (Western) lake', also (Western) vatsa-vatsa[barred l] 'small pond'; perhaps also Pazeh ʔawas,

Favorlang abas < *qa-was[al] 'sea'. P-Polynesian *wasa 'open sea, sea as an interval of space and time between two places'.

Jp. wata.

SEA See DEEP/.
SEED See FRUIT/.

SEIZE (WITH HANDS ~ TEETH)/BITE/EAT P-Austro-Kadai (I) *caŋkup

P-Austronesian- *caŋkup: P-Hesperonesian id. 'snap at'; also (Javanese) 'handful'; also (Malagasy) 'chew'.

(II) *caŋkup > (ŋ)kup(ŋ)kup

P-Austronesian- *kupkup: P-Malayo-Polynesian *kupkup = *(ŋ)kup(ŋ)kup 'seize, hold': P-Polynesian *kuku < *ku[p]ku[p] 'draw together'; also (Samoan) 'take hold of, grasp': Fijian ququ-ca < *ŋku[p]ŋku[p] 'hold in hand, cling to', vas-ququ 'hold fingers like claws'.

P-Kadai- *kuup < *kupkup: P-Li *kuup: Cun Hua kup 'snatch/grab' (with tonal reflex for long vowel).

P-Kadai- *grup < *ŋkrup < *ŋk-r-up (with infixed *-r-): P-Southern Tai/P-Northern Tai *grup: Siamese khrup^{L} 'seize with the claws (of animals)', Saek thrup^{L} 'pounce upon'.

P-Kadai- *ŋup < *ŋgup < *[ŋkup]ŋkup (secondary voicing): P-Southern Tai- *ŋup: Siamese ŋup 'seize, carry away, take with avidity'.

Jp. ku-i, OJ kuF-i 'seize with the teeth, bite, eat'.

(III) *kəp(kəp)

P-Austronesian- *kəpkəp: P-Hesperonesian id. 'seize, hold'.

P-Kadai *kop (with aspiration as initial): P-Southern/Central Tai *khop '(seize with teeth =) bite (F-K. Li 1977:209, 269). P-Li *khop: White Sand khop 'grab a handful'; Tong-shen, Bao-ding id. 'handful'.

NOTE: This root, which well illustrates the /u/ ~ /ə/ variation in the stock, appears to be the 'active' member ('seize with the hands ~ teeth') of a basic pair of Austro-Tai etyma represented on the 'passive' side by the root under HOLD (IN HANDS ~ MOUTH), which features /a/ ~ /ə/

variation. It is probably significant that the 'active' member has final *-p, the 'passive' final *-m.

SELL See EXCHANGE/.
SEW See STITCH/.

SHALLOW P-Austro-Japanese *[q,ʔ]a[ts,tś]a[t,c]

P-Austronesian- *[q,ʔ]ats$_{123}$a[t,c]: P-Hesperonesian *ʔat′at = *ʔat′$_{12}$at.

Jp. asa- 'shallow'.

Jp. se 'shallows, shoal', from *sai < *sa-i (nominalized form with -i).

SHELL P-Austro-Japanese *kapi[ts,tš,tś]

P-Austronesian- *kapits$_{123}$: P-Hesperonesian *kapis = *kapit′$_{12}$ 'a kind of shell' (Blust 1980a).

Jp. kai, OJ kaFyi = kaFi.

SHELLFISH P-Austro-Kadai *(n)[ts,tś]i[ts,tś]i

P-Austronesian *ts$_{123}$its$_{123}$i: P-Malayo-Polynesian *sisi or *sisiʔ = *t′$_{12}$it′$_{12}$i(ʔ) '(small) shellfish/snail' (Blust 1980a, without citation of general gloss); also (Cebuano) 'small oysters', (Rotuman) 'edible shellfish, the periwinkle', (Tongan) 'shellfish, like hard-shelled snail', (Rennellese) 'edible Narita shells', (Samoan) 'name given to small snails in general': P-East Oceanic *sisi 'mollusc sp.': P-Polynesian id. 'shellfish sp.'; also (Futuna) 'name of a small mussel' (Dempwolff 1938).

P-Kadai *tsi-i^{A}: P-Li *tshei^{A}: Bao-ding, Zhong-sha, Hei-tu, Xi-fang, Bai-sha, Yuan-men, Tong-shen, Qian-dui, Bao-cheng tshei; Jia-mao (compound) tshai 'spiral shell, snail'; also (except for Xi-fang) '(compound) freshwater mussel/clam'; White Sand chei 'snail'; Central Li sei 'shellfish'; Small Cloth Loi id. 'bivalve' (secondary aspiration as initial).

Jp. sizimi, OJ sizimyi = sizimi 'a fresh-water clam (*Corbicula*)' with secondary voicing), compounded with -mi (not analyzed).

Jp. nisi 'small edible spiral river shell', from *nsisi.

NOTE: Dempwolff 1938 cites the Futuna and other Polynesian forms under P-Malayo-Polynesian *t'it'k = *t'$_1$it'$_1$ik '(fish) scales', an entirely distinct root. The final (see Proto-Malayo-Polynesian as reconstructed in Blust 1980a) is disambiguated by P-Kadai final *-i rather than *-ik (< *-iq).

SHINE See LIGHT/.

SHINE/GLITTER P-Austro-Kadai *(ŋkiḷaŋ(kiḷaŋ) > *(ŋ)giḷaŋ(giḷaŋ)

P-Austronesian- *(ŋ)giḷaŋ(giḷaŋ): P-Malayo-Polynesian *gilaŋ = *(ŋ)gilaŋ(gilaŋ)'glitter': P-Polynesian *kikila < *gi[laŋ]gila[ŋ] 'shine, glitter'; also East Futunan, East Uvean, Tongan ŋiŋila < *ŋgi[laŋ]ŋ gila[ŋ] 'id.'.

P-Kadai *kḷaŋ^{A}: P-Southern Tai *rɨaŋ^{A} 'shine; shining, glittering': Siamese rɨaŋ; Lao hɨəŋ^{L}; Khamti, Shan höŋ^{L} (with destressing > vocalic transfer); also *ria^{C} 'shine, glitter; brilliant': Lao hɨa^{L}, Shan hö^{L}, from the partially reduplicated form: *[k]iḷa[kiḷaŋ], paralleling P-Polynesian (note the tonal shift). P-Kam-Sui *kḷaaŋ^{A} <*kaḷaŋ '(shining =) light' (with *i > *a assimilation > vocalic transfer): Mulao kγa:ŋ; Kam kwa:ŋ; Mak, Maonan ca:ŋ; Sui da:ŋ^{H}. Lakkia: Lingzu kla:ŋ^{A} 'light'; Jinxiu, Changdong kya:ŋ^{A} 'id.' (with development as in Kam-Sui).

Jp. 光る kira-kira ~ (compound) kira- 'glittering(ly), brilliant(ly).

SHOOT See BUSH/.
SHORE See WIDE/.

SHORT P-Austro-Kadai *(m)pe(n)dlek

P-Austronesian- *pinḍik: P-Hesperonesian id. (see Note).

P-Kadai- *C$_t$V$_i$dlek < *[pe]dlek: P-Southern/Central Tai *ʔdlek, as reflected by doublet: *ʔdek '(short person =) child' (F-K. Li 1977:108); also (Lao) 'small' ~ P-Southern Tai *(ʔ)lek 'small': Khamti, Shan, Siamese lek^{L}; Lao lek^{H}; note Siamese dek^{H} lek^{H} (< *ʔdlek) 'children'.

Jp. mizika, OJ mizika, from *mizik-a (with suffixed *-a).

NOTE: This root provides unusually persuasive evidence for reconstructing P-Austronesian medial *-e- (6.1): the Proto-Hesperonesian root is represented by Javanese peṇḍe?, Malay pende?, and Toba-Batak pendek.

SHOULDER P-Austro-Japanese *baḷika[t,c]

P-Austronesian- *baḷika[t,c]: P-Hesperonesian *balikat.

Jp. kata, with suffixed *-a.

SIBLING (OLDER) P-Austro-Kadai *?a(ń)ji

P-Austronesian *sua(ń)ji 'younger sibling' (Blust 1980c), probably from *-a(ń)[j]i (Note 1): P-Philippine $w_a$ji ~ *?a:ji 'sibling'.

P-Kadai *?a(ń)[j]i^B: P-Southern Tai *?aay^B: Ahom ai 'eldest son'; Khamti id. 'appellation for first sons'; Lao ?aay 'first; oldest brother'; Siamese id. 'first'; Black Tai, White Tai a:i 'father; (compound) older brother' (with medial *-j- > [0] and compensatory vowel lengthening). Gelao: Thü ənе (< *ənay) 'older brother', from *əń[j]ay (with destressing).

P-Kadai *?i̯ay^B < *?i-ay (with prefixed *?i- (see 9.23)): Siamese ?i̯ay 'first born'; Lao ?iəy, Black Tai ?iəi 'older sister'; White Tai öi 'you (polite term to unrelated woman)'.

Jp. ani 'older brother'.

Jp. ane 'older sister', from *ani-a (with suffixed *-a).

Ryukyuan: Yonaguni ati 'older sister' (without nasal increment).

NOTES

1. Zorc (1981:37), citing the P-Hesperonesian doublet as *$h_a$ji?, has proposed that the P-Austronesian root be reconstructed as *Saji? = *saji, with prefixed *?u- >w- (see 9.22) along with metathesis in the Formosan languages. Both the Kadai and Japanese cognates, however, appear to rule out an initial *s- in this etymon. A trisyllabic *suwa(n)ji cannot be excluded but, again, the Kadai and Japanese cognates speak in favor of the disyllabic *?a(ń)ji.

2. The Southern Tai forms clearly point to an original *?a(a)y 'older sibling', with the *?i- prefix added to distinguish 'older sister' (not *?i-ay > *?iay since Southern Tai lacks final *-iay).

3. The evidence in general (10.41) seems to establish the original meaning of this root as 'older sibling', with shift in Austronesian to 'younger sibling' via 'sibling' (the P-Philippine gloss) as the result of replacement by the intrusive *?aka ~ *kaka 'older sibling' (cited in 10.43).

SIDE/BORDER P-Austro-Japanese *təpi

P-Austronesian- *təpi: P-Hesperonesian id.

Jp. -e, OJ -Fye = -Fe '(compound) side', as in Jp. mae, OJ maFye = maFe 'eye (ma-) side (-Fe)' = 'front' (Martin 1979 citation), from *-Fi-a (with suffixed *-a).

Jp. -be, OJ -bye = -be '(compound) side', as in Jp. umibe, OJ umibye = umibe 'sea (umi-) side (-be)' (with secondary voicing in compounds).

SIDE (OPPOSITE)/BARK CLOTH P-Austro-Kadai *[t,C]a(m)baŋ

P-Austronesian- *[t,C]a(m)baŋ: P-Malayo-Polynesian *ta(m)baŋ 'side; opposite side': P-Polynesian *tafa < *taba[ŋ] 'side, edge'; also *tapa < *tambaŋ '(decorated on one side =) bark cloth'.

P-Kadai *C_tV_p(m)ba$ŋ^{B/C}$ < *[t]ə(m)baŋ (with destressing): P-Southern/Central Tai *ʔbi̯aŋ^{B} 'side' (F-K. Li 1977:70) (with vocalic transfer). P-Kam-Sui *ʔ(m)bi̯aŋ^{C} 'id.': Sui ʔbyaŋ/ʔmyaŋ ~ waŋ^{H} ~ ʔwəŋ/ʔwuəŋ, Mak ʔbu:ŋ, T'en ma:ŋ^{H}. Lakkia pie:ŋ$^{C-1}$ < *bi̯aŋ^{C} (without reflex for *C_t).

Jp. tae, OJ taFë 'bark cloth', from *taFai.

NOTE: The Japanese word is perhaps an early loan from some Malayo-Polynesian source (see 12).

SISTER (OF MAN/YOUNGER) P-Austro-Tai *ʔimu-a

P-Miao-Yao- *mua^{C}: P-Yao id. 'younger sister' (Purnell 1970:180), with 'kin term' suffixed *-a (10.45).

Jp. imo, OJ imwo = imo 'younger sister (male speaking)', from *mua < *mu-a (with suffixed *-a).

NOTES

1. Japanese appears to have retained the original meaning of this root, with loss of the distinction in Miao-Yao (10.41).
2. For the initial *ʔi- element, see 10.43.

SIX P-Austro-Kadai *ʔumləm

P-Austronesian *ʔənəm = *ʔunəm ~ (destress doublet) *ʔənəm (Tsuchida 1976:182). The Paiwanic cognates generally retain V_1 = /u/: Paiwan (Ferrell 1981; also all five dialects recorded in Ho 1978), Puyuma (Kasabakan and Katipul dialects), also (earlier) Ami (unum, a 1903 recording cited in Ferrell 1969). The destressing in SYL-1 of this root has been reinforced by assimilation to V_2 = /ə/.

P-Kadai- *[SYL]mləm^A < *[ʔu]mləm: P-Li *[SYL]nəm^A: Southern Li nom; Northern Li, White Sand, Bao-ding tom; Tong-shen tom^L; Ki d_am = *t_am; Laqua n_am; Pupeo mɨ-hn[a breve]m (written mɨn h_am), with prefixed mɨ- in numerals from 'six' through 'nine' (cf. mö 'five'); Laha: Than-Uyên dr_am < *nr_am < *mr_am. Lati: Ban Phung nam; Gelao naŋ (Clarke 1911); Gao nan^A; Aou mlaŋ; Hagei ńaŋ; all from *mla[m].

Jp. mu- ~ mui-, the latter as compounded in Jp. muika, OJ muyuka 'six (muy-) days (-uka)', from *[ʔu]m-uml[əm], with reduplication as in 'five' and perhaps 'four' (10.3) and regular *ml > /i/ shift (7.22).

SKIN P-Austro-Japanese *kaba

P-Austronesian- *kaba: P-South Formosan id.: Kanakanabu (Tsouic) káva 'skin', Paiwan kava '(skins =) clothing'.

Jp. kawa, OJ kaFa 'skin; hide/fur'.

SKIN (v.) See STRIP/.
SLAUGHTER See CUT (MEAT)/.
SLOPE See STEEP/.
SLOUGH See EMPTY (UNOCCUPIED)/.

SMALL P-Austro-Japanese *tipi[ts,tš]

P-Austronesian *tipits$_{123}$: P-Hesperonesian *tipit′ = *tipit′$_{12}$ 'thin'; Sediq (Atayalic) tipix 'small'.

Jp. tiisa, OJ tiFisa, from *tiFis-a (with suffixed *-a).

SMALL See YOUNG/.

SNAIL/WORM P-Austro-Kadai *munaḷ

P-Austronesian- *muna[ḷ,γ]: Saisiyat (Paiwanic): Taii monaL, Tungho mona 'snail'.

P-Kadai- *$C_{ts}V_i$nool^A < *-nual < *[m]unal (with vocalic transfer): P-Tai *hnoon^A = *hnool^A 'worm' (F-K. Li 1977:114); also (Khamti, Shan, White Tai) 'maggot': Saek nɔɔl^H 'worm' (for the Northern Tai group, F-K. Li 1977 cites only Dioi noon^H); probably from an original form with the widespread prefixed *qa- (> $C_{ts}V_i$-).

Jp. nina (with /m/ > /n/ assimilation), OJ mina 'snail', with *u > /i/ dissimilation after initial m- (6.3).

NOTE: Martin 1979 cites Ryukyuan: Shodon myinyaa 'shell' as cognate; also Shuri nna 'empty', with the comment: 'it is from *muna and unrelated' (!). If the Shuri form is indeed related, as now seems very likely, it would indicate that V_i = /u/ was retained in this root, without the dissimilation, at the Proto-Japanese-Ryukyuan level.

SNAKE P-Austro-Japanese *[q,ʔ]oḷəj

P-Austronesian-*[q,ʔ]uḷəj: P-Hesperonesian *ʔuləj 'worm, maggot'; also (Northern Philippine: Itneg, Ilocano, Manabo, Luba, Kankanay, Inibaloi, Pangasinan) 'snake': P-Philippine *ʔuləj 'snake; worm'.

Jp. oroti, OJ woröti 'large snake', from *(u-)orot-i (see 9.22 for this prefix), with suffixed *-i (see 9.42).

SOOT P-Austro-Japanese *[q,ʔ]u[ts,tš]u[q,ʔ]u[ts,tš]u

P-Austronesian- *[q,ʔ]uts$_{123}$u[q,ʔ]uts$_{123}$u: P-Hesperonesian-*ʔut′$_{12}$ut′$_{12}$u: Philippine: Sambal ʔusu:ʔus < *ʔusuʔus[u], Cebuano ʔanu:ʔus < *ʔ-n-u[su]ʔus[u] (partial reduplication, with infixed -n-).

Jp. susu (with partial reduplication, as in Philippine).

SOUND P-Austro-Japanese *šuni

P-Austronesian *S$_2$uni = *šuni (Tsuchida 1976:250).

Jp. ne, from *nia < *ni-a (with suffixed *-a).

SPEAK/CALL P-Austro-Kadai *qibu

P-Austronesian- *qibu: Paiwan *qivu 'speak, call'.

P-Kadai- *[q]iw^{A} < *[q]**iu: P-Southern Tai- *kiw**^{A} ~ ʔiw^{A}: Shan, Khamti kiu ~ ʔiu 'call, shout', with initial *k- ~ *ʔ-, apparently reflecting an earlier *q-.

Jp. i-i, OJ iF-i 'speak', from *iFï < *iFui < *iFu-i.

SPEAR (v.) See THRUST/.

SPIDER P-Austro-Japanese (I) *kuba

Ryukyuan: Shuri kuubaa; also (with *a > /u/ assimilation) Shuri kubu (doublet form) and (with destressing) Kyushu dialect kobu ~ koobu (all cited in Martin 1979).

(II) *kumbakumba

P-Austronesian- *kumakuma < *kumbakumba: Paiwan kuma-kuma.

Jp. kumo, OJ kumwo = kumo, from *kumau[ma] (with partial reduplication).

SPIKE See SPIT/.

SPIRIT/POWER (DIVINE) P-Austro-Japanese *liCu

P-Austronesian *q_aaNiCu = *(qa-)liCu 'evil spirit' (Tsuchida 1976:166): P-Hesperonesian *ʔanitu 'departed soul'; P-Polynesian *aitu < *[q]a-[l]itu 'ghosts, spirits'.

OJ itu 'divine power' (Shiba 1983 gloss).

Jp. mi-itu 'Imperial Majesty' (for mi-, see GOD/).

Jp. itu-k-i 'deify', with 'factitive' *-k suffix (9.43).

NOTES

1. Both Tsuchida 1976 and Blust 1972a present the Proto-Austronesian root as trisyllabic, thereby incurring an insoluble problem with the Proto-Polynesian form (above). Tsuchida adds it in a footnote as 'possibly cognate', while Blust, who overlooks the Formosan (Tsouic/Rukai and Bunun) cognates, reconstructs only a root for Proto-Malayo-Polynesian: *ʔa[n,ń]itu, including the Proto-Polynesian form but pointing out that the loss of *[n,ń] is 'unexplained'. In his latest (Blust 1980a) handling of this root he simply excludes the Proto-Polynesian form! The key is supplied by the fact that in Malayo-Polynesian initial *l- is occasionally lost (>[0]), as regularly in Japanese,

e.g., Blust 1980a cites P-Hesperonesian *əsuŋ as a doublet for *ləsuŋ < *lusuŋ 'mortar' (> Jp. usu). P-Polynesian *aitu can accordingly be derived without any difficulty from an earlier free form: *litu (< P-Austronesian *liCu), with subsequent *qa-prefixation.

2. It would appear that Austronesian has preserved the earlier meaning of this root: 'spirit of the dead/ghost', replaced in this sense by Jp. tama(siFi) (see FATHER/) but surviving in the language as the abstract 'divine power'.

SPIT/SPIKE P-Austro-Japanese *kludzi

P-Austronesian- *$ts_{12}udz_1i$: P-Hesperonesian *t'ud'i = *$t'_{12}ud'_1i$ 'point/spike'; also (Javanese) 'spit'.

Jp. kusi 'spit, skewer'.

SPIT/SPITTLE P-Austro-Japanese *tśu(m)paq

P-Austronesian *ts_3u(m)paq ~ (destress doublet) *$ts_3ə$(m)paq: P-Hesperonesian *t'ə(m)pa? = *$t'_{12}ə$(m)pa? 'chew out [betel]': Ngadyu Dayak simpa 'chew betel' ~ sipa 'betel cud'; also (Yami, North Philippine: Ivatan) 'spittle'. Ami (Paiwanic) supaq 'id.' (maintaining V_1 = /u/).

OJ tubak-i 'spit' (v.) ~ OJ/Jp. tubaki 'spittle'.

Jp. tuba ~ tu 'spittle'.

NOTES

1. The core meaning of this root: 'spit/spittle' has been maintained in Japanese and the more northern Austronesian languages, with widespread extension to 'betel chewing/cud' in the more southerly Austronesian languages.

2. Jp. Fak-i 'spew out, vomit' is also a possible derivative of this root, through regular canonical reduction-left, but the semantic development involved remains unclear.

3. Alternatively, one can interpret OJ tubak-i 'spit' (v.) as involving the 'factitive' suffix *-k (9.43).

SPITTLE/SALIVA P-Austro-Japanese *ḷudaq

P-Austronesian *l_1ud_1aq = *ḷudaq 'spittle' (Dahl 1976:58); also (Paiwan) 'betel nut spittle' (paralleling the Hesperonesian development in SPIT/SPITTLE).

Jp. yoda-ri, OJ yota-ri 'saliva' (destressed/nominalized form with suffixed -ri). Ōno et al. 1982 cite a Heian (9th century) source for OJ yota-ri but Martin 1979 states that the three citations in Mochizuki's index show only -d-.

SPLIT See STRIP/.

SPREAD/LEAF/FLAT P-Austro-Kadai (I) *(m)biḷaj

P-Austronesian- *(m)biḷaj: P-Malayo-Polynesian *bəlaj ~ (destress doublet) *bəlaj 'spread out': P-Philippine *b[i breve]laj ~ *bəlaj '(spread out clothes =) dry in sun', P-Polynesian *pola < *mbəla[j] '(something spread out =) plaited coconut leaf'; also (Fijian) 'mat of plaited coconut leaf', (Maori) 'coarse cloak, floor mat'.

Jp. Fira, OJ Fyira = Fira '(spread out =) flat; leaf, sheet; flake; kind of (flat) fish'.

Jp. bira-bira '(leaf-like =) flutteringly' (with secondary voicing).

Jp. Fire, OJ Fyire = Fire '(something flat/moving =) scarf; fin', from *Firë < *Firai < *Fira-i (nominalized form with suffixed *-i).

(II) *piḷaj

P-Kadai- *phee^{C} < *phia < *pi[ḷ]a[j] (with regular loss of medial *-ḷ- and 'Procrustean' loss of final *-j after *-ia-; cf. Benedict 1975:156, 157): P-Southern Tai *phee^{C} 'spread out/open'; also (Ahom) 'spread (straw), sun (paddy)': Siamese, Lao phɛɛ; Khamti, Shan, White Tai phɛ; Ahom phe.

SPREAD/STRETCH P-Austro-Tai *sa(m)paR

P-Austronesian *S$_{13}$apaɣ = *sa(m)paɣ 'lay mats' (Tsuchida 1976:235): P-Malayo-Polynesian *hampa[r,ɣ] = *hampaɣ 'spread out, stretch out'; also (Malay) 'spread out (as mats)', (Chamorro: Dahl 1976 citation) 'mat': P-Oceanic *ʔampa ~ (destress doublet) *ʔempa: Fijian yamba 'mat', Saʔa epa 'lie, like a mat', Samoan id. 'mat'.

P-Kadai- *C$_{s}$V$_{p}$(m)pan^{A} < *[sə](m)pa[ɣ] (with destressing, as in the Proto-Oceanic doublet): P-Southern/Central Tai *phi̱[barred i]n^{A} 'classifier for mats, nets, coverlets, etc.': Siamese, Lao ph[barred i]ṉ; Shan, White Tai, Tho phi̱n; Khamti phun; Black Tai fi̱n (with secondary aspiration by *s-, along with vocalic transfer > assimilation); P-Southern Tai- *bi̱an^{A}: White Tai pön^{L} 'mat (of plaited bamboo)', from *mpi̱an^{A} (with simple vocalic transfer). Be phan^{A} 'classifier for mats, hammocks (= nets)' (secondary aspiration, without vocalic transfer); also phena 'spread (mats)' (tonal doublet). P-Li *phi̱an^{B} 'spread (mat, coverlet)': Southern Li ph[barred i]ən, White Sand phöŋ < *phön (with simple vocalic transfer).

P-Miao-Yao *phaan^{A}: P-Yao id.: Mien: Chiengrai phaan 'classifier for mosquito nets'. P-Miao ph[[ɔ~]]^{A} 'classifier for quilts' (F-S. Wang 1979:24, 176); also (Cheng-feng) 'classifier for mats, clothing, coverlets, etc.'; possibly an early loan in this specialized usage from Tai.

Jp. Far-i 'spread, stretch'.

Jp. Fara '(spread of land =) plain, field', with nominalizing suffixed *-a (9.41); for the semantics, cf. American English *spread* (of land).

SQUID See FISH/.

SQUIRT/EJECT P-Austro-Japanese *(m)piR(m)piR

P-Austronesian- *piɣpiɣ: P-Hesperonesian id. 'squirt'.

P-Austronesian- *p-ɨ-iɣ: P-Hesperonesian *pəliɣ '(the squirter =) penis'.

P-Austronesian- *miɣmiɣ < *mbiɣmbiɣ (secondary voicing with nasal increment): P-Hesperonesian *miɣmiɣ 'water (v.), squirt'. P-Polynesian mimi 'urine; urinate'.

Jp. Fir-i 'eject, evacuate, void (fart, excrement)'.

NOTE: The Kadai cognate here may be P-Li *pik: Southern Li pi '(squirt snot =) blow nose'; White Sand pik 'squirt', with final -k as reflex for *-R, paralleling Tai final *-ŋ (see ROUND).

STALK See LEG/.

STALK/FOOT P-Austro-Japanese *kudkud

P-Austronesian *kudkud: P-Paiwanic- id.: Thao ku[theta]ku[theta] 'foot'. P-Malayo-Polynesian *kukud < *kudkud 'shank or hoof of animals' (Blust 1980a); also (Kelabit [Hesperonesian]) 'foot, leg', Northern Philippine: Ivatan kukud, Manabo ku:kod 'foot'.

Jp. kuki, OJ kukï ~ (compound) kuku- 'stalk, stem', from *kukui.

NOTE: For the semantic association 'stalk' ~ 'foot', see LEG/STALK.

STALL See ROOM/.

STAR P-Austro-Japanese *buxis

P-Austronesian- *buqis: P-Paiwanic- id.: Ami fo?is.

Jp. Fosi (with destressing).

STAR/MOON P-Austro-Tai (I) *bi(n)tuqan

P-Austronesian *bi(n)tuqan ~ (destress doublet) *bituqən 'star': P-Paiwanic id.: Paiwan vit'uqan, Saisiyat bintö?än, Bunun bintohan; also (with destressing) Puyuma bitu[barred h]ən ~ vitu[barred h]ən. P-Hesperonesian *bitu?ən.

P-Kadai- *[q]ən: Lati khön 'star' (Lajonquière 1906) (with destressing, as in Austronesian).

(II) *bituqan > *bituqun

P-Austronesian- *bituqun: P-Polynesian *fetu?u 'star' (with *a > *u assimilation).

P-Miao-Yao- *q[un]^{A}: P-Miao *qu(n)^{A} 'star' (Purnell 1970:195, F-S. Wang 1979:108, 174), from *quun < *[bit]uqun, with assimilation as in Proto-Polynesian.

Jp. tuki, OJ tukï ~ (compound) tuku- 'moon', from *tukui (with assimilation, as in Proto-Polynesian and Proto-Miao-Yao).

NOTE: The doublet for this root, with and without assimilation, must be set up at the Proto-Austro-Tai level in view of the correspondences among Proto-Polynesian, Proto-Miao-Yao, and Japanese. The *-an perhaps represents the referent-focus marker *-an (9.41), affixed to a basically verbal root, e.g., 'glitter', hence Jp. 'moon' as well as 'star'. It is also likely that the shift in Japanese was in part, at least, an effect of replacement by an intrusive root (see STAR).

STEAM/HOT WATER P-Austro-Japanese *l̥ihul

P-Austronesian- *l̥ihul: P-South Formosan *laH$_{1}$u[barred l] 'steam, vapor' (Tsuchida 1976:136) = *(qa-)l̥ihul > *[qa-]l̥ahul (with *i > *a assimilation): P-Paiwanic *(qə-)l̥iul (prefix only in Paiwan dialect),

Puyuma liwl-an < *liul-an; also Ami (Paiwanic) lahu[barred l], Kanakanabu (Tsouic) aúnu, both showing the *i > /a/ assimilation.

Jp. yu 'hot water', from *yiu.

NOTE: Tsuchida adds the comment: 'Pai. liu[barred l] 'steam' is perhaps cognate, but the *i* for anticipated *a* is inexplicable' (1976:190 - Note 36). The Puyuma and (complete) Paiwan material was not then (1976) available, however, with the evidence for an earlier prefixed *qa- to provide a basis for the assimilation reflected in Ami and Kanakanabu.

STEEP/SLOPE P-Austro-Japanese *sipaḷ

P-Austronesian- *[s,š]ipa[ḷ,γ]: P-Paiwanic- id.: Saisiyat śipaL 'steep', śipśipaL 'slope'.

Jp. soba 'slope, slant' (with destressing and secondary voicing).

Jp. soba ~ sowa, OJ soFa 'cliff' (with destressing only).

STEM/TRUNK P-Austro-Kadai *ba(n)taŋ

P-Austronesian- *bataŋ: P-Malayo-Polynesian id. 'stem, trunk, stand'.

P-Kadai *C$_t$adaŋ$^{B/C}$ < ***antaŋ**: P-Southern Tai *ʔdaŋ^{B} '(trunk =) upright (supporting) timber': Siamese, Lao daŋ^{H}; Shan laŋ^{H}; Khamti naŋ^{H}. Lakkia ta:ŋ$^{C-1}$ 'stem/stalk', from *daaŋ^{C} (with vocalic transfer).

Jp. Feta 'calyx, stem' (with destressing).

STEP See MOVE (FEET)/.
STICK (v.) See THRUST/.

STITCH/SEW P-Austro-Japanese *ra(ń)jup

P-Austronesian- *rajup: P-Hesperonesian id. 'stitch, join' (Blust 1980a).

Jp. nu-i, OJ nuF-i 'sew, stitch'.

STORM See FAST (BLOW)/.

STRIP/SKIN/SPLIT P-Austro-Kadai (I) *[ts,tš]i(m)pak

P-Austronesian- *ts_{123}i(m)pak: P-Hesperonesian *si(ŋ)pak = *t'_{12}i(m)pak 'split' (doublet of *sibak under II) (Blust 1970).

(II) *[ts,tš]i(m)pak > *[ts,tš]ibak

P-Austronesian- *ts_{123}ibak: P-Hesperonesian *sibak = *t'_{12}ibak 'cleave' (doublet of *si(ŋ)pak under I) (Blust 1970); also (Tagalog) 'split (wood)'.

(III) *[ts,tš]ibak > *bak(bak)

P-Austronesian *bakbak: P-Malayo-Polynesian id. '(split off bark =) debark'. Saisiyat (Paiwanic) bakbak 'strike with piece of bamboo'.

P-Austronesian- *bak: P-Hesperonesian id. 'split off'.

P-Kadai- *baak < *bakbak: P-Southern Tai- *baak: Ahom pak 'split into halves', Shan $pa:k^{L}$ 'skin, take off by skinning'.

Jp. Fag-i 'strip off, tear off; flay, skin'.

SUBORD. PARTICLE See THAT/.

SUCK P-Austro-Tai *(ñ)tšuptšup

P-Austronesian *$ts_{123}upts_{123}up$: P-Hesperonesian- *$t'_{12}upt'_{12}up$: Cebuano, Bikol supsup; Northern Philippine: Sambal, Kankanay id.; Kalinga supsup-an (with referent-focus marker *-an); Itneg su:sup; Gaddang sussup; Isneg s-um-usup. P-Paiwanic *$ts_{12}upts_{12}up$: Puyuma supsup-u, Bunun supsup-un, Kabalan s-um-upsup.

P-Kadai- *suup < *supsup: P-Tai *suup: Siamese suup 'suck in with the mouth, absorb, swallow up; pump (v/n.), bellows', Lao id. 'inhale (as opium); pump'; Tho sup '(inhale =) scent, small (v.)', Nung id. 'smell (v.tr.)'; Dioi id. 'suck, kiss', Saek suup 'pump (water) (v.)'.

P-Miao-Yao- *nts[op]: P-Miao *nts[əi]? (F-S. Wang 1979:54, 136).

Jp. su-i, OJ suF-i 'suck, sip, inhale'.

NOTE: Tsuchida 1976:129 places the Bunun form (Bunun /u/ < *u ~ *ə) under a distinct Proto-Austronesian root: [theta]əp[theta]əp = *ts_{2}əpts_{2}əp 'suck', with representation in Paiwanic (Paiwan, Puyuma, Ami) as well as in Polynesian (Samoan), to which can be added another

Malayo-Polynesian form: Nggela sop-i (Blust 1978); also an apparent mainland cognate: P-Southern Tai- *soop: Shan s[raised inverted comma]ɔp 'hunt for anything by the sense of smell, scent a track' (cf. Tai), from *sopsop; perhaps also the Proto-Miao-Yao form under I (P-Miao-Yao *o < *u ~ *ə). This would appear to yield a final *-up ~ *-əp doublet, comparable to that under SEIZE (WITH HANDS ~ TEETH), with *ts_2- (< P-Austro-Tai *tš-) indicated also for the *-up root.

SUGARCANE See REED/.
SUMMIT See HILL/.
SUN (GOD) See GOD/.

SWAMP/FIELD (WET)/RICE/MILLET P-Austro-Japanese *[ts,tš] abaq

P-Austronesian *ts_{12}abaq: P-Malayo-Polynesian *t'aba? 'irrigated rice-field'. P-Paiwanic *ts_{12}abaq: Kabalan sa:va? '(rice-field product =) rice plant' (Ferrell 1969) ~ sabaq 'unhusked rice' (Moriguchi 1983), Paiwan tavaɬ < *ts_{12}abal < *ts_{12}ab-al[-aq] 'seedlings which are already planted' (cf. Kabalan).

Jp. sawa, OJ saFa 'swamp, marsh'.

Jp. awa, OJ aFa < *[z]aFa 'millet (*Sativa italica*)'; cf. Paiwanic.

NOTE: The Paiwanic and Japanese semantic developments in this root are strikingly parallel to those found in the FIELD (DRY) root (see Note on that entry), even to the matching *-al- ~ -aṇ- infixation.

SWELLING P-Austro-Tai (I) *kəmpuŋ

P-Austronesian- *kəmpuŋ: P-Malayo-Polynesian id. '(swelling =) belly'; also (Malay) 'bladder'.

P-Kadai- *$buŋ^A$ < *[kə]mpuŋ: P-Southern Tai/P-Northern Tai *$buŋ^A$: Siamese $phuŋ^L$ 'belly, entrails'; also (tonal doublet) $phuŋ^{B-1}$ '(compound) convexity of the belly'; Saek $phuŋ^L$ 'belly'.

P-Miao-Yao- *$mpoŋ^A$: Yao: Mien: Chiengrai $boŋ^H$ 'rise (as leavened dough)'; also 'mountain, mountain peak'.

(II) *kəmpuŋ > *kə(m)buŋ

P-Austronesian- *kə(m)buŋ: P-Malayo-Polynesian id. 'inflate'; also (Malay) 'swell, swollen', (Toba-Batak) '(something inflated/large =) large box/case'.

P-Kadai- *$C_tV_i$buŋ^A < *[kə]buŋ: P-Tai *ʔbuŋ^A 'a kind of basket [large basket/hamper]' (F-K. Li 1977:69) (cf. the Toba-Batak gloss).

P-Miao-Yao- *mboŋ^A: Yao: Mien: Chiengrai boŋ^L 'a bump or lump on an otherwise smooth surface'.

Jp. kobu 'swelling, wen, lump, bump'.

NOTE: Kadai (largely Tai) has a rich series of forms that appear to represent an early (Proto-Austro-Kadai) *kəpəŋ ~ *kəbəŋ doublet: P-Southern Tai *poŋ^C: Siamese pooŋ 'swell, become big (as the belly)' (with secondary lengthening); Khamti, Shan, Lao poŋ; White Tai puŋ 'shoot up (as a plant)'. Lakkia poŋ^B 'pile up, heap up'. Also P-Tai *booŋ^A 'swell up' (F-K. Li 1977:66); also (Khamti) 'protuberance; (compound) goiter; calf of leg', (Siamese) 'tumor', (Lao) 'swell (as a blister)' (with vocalic transfer). Lakkia kya:i^B po:ŋ$^{A-1}$ 'belly' = 'swollen guts (kya:i^B)', from *booŋ^A (with vocalic transfer, as in Tai).

TAIL See HIND-PART/.

TASTE/LICK/CHEW/NIBBLE P-Austro-Kadai *ńaʔam(ńaʔam)

P-Austronesian- *ńa[ʔ]am/ńa[ʔ]am: P-Malayo-Polynesian id. 'taste' (Blust 1970, 1973), revising *[n]am[n]am (Dempwolff 1938) with the addition of Javanese ńam-ən ~ ńam ńam-ən 'the taste of something in the mouth', Malay ńam-an 'id.' (both with goal-focus marker *-ən), Western Bukidnon Manobo (Philippine) naman 'taste, flavor', naʔam naʔam 'taste food to see if it is good'; P-Oceanic ńamu ~ ńami (Blust 1973) (with suffixed -u ~ -i): Fijian namu 'chew and swallow', Gedaged nam 'eat (when speaking of small children)': P-Polynesian *namunamu 'odor, flavor'; also (Easter Island) 'chew, taste', (Hawaiian) 'nibble, chew with closed mouth'.

P-Kadai *(C_{ts})ńa(a)$m^{B/C}$ < *ńaʔam(ńaʔam): P-Southern Tai/P-Northern Tai *hńa(a)$m^{B/C}$ 'chew' (F-K. Li 1977:173); also (Shan) 'partially chew food (as children or persons who have lost their teeth', (Ahom) 'eat with the lips from a bamboo joint (as children or persons who have lost their teeth), (Po-ai, Wu-ming) 'chew food and give it to the baby', (Dioi) 'swallow down rapidly'. P-Kam-Sui- *ńaam^{C}: Mak ńa:m 'chew food to feed infants'.

Jp. name-, OJ namë 'lick, lap up, taste, nibble', from *namai < *naman < *nam-an, with suffix corresponding to the Proto-Austronesian referent-focus marker *-an (cf. *-ən in the Javanese and Malay forms, above).

TEN P-Austro-Kadai *poṇo[x]ot

P-Austronesian *puluq = *puṇuq (Dahl 1976:29), from *puluq[ut] (with canonical reduction-right).

P-Kadai- *pwot < *pṇ[ox]ot (with canonical reduction-center): Southern Li phuot; Hei-tu phu:t; Jia-mao puət; Northern Li fuot; Baoding, Zhong-sha, Tong-shen, Qian-dui, Bao-cheng fu:t; Xi-fang, White Sand, Bai-sha, Yuan-men fut; Laqua pət; Pupeo pöt; Laha: Than-Uyên id. Lati: Ban Phung pö (Robert 1913) ~ pa (Bonifacy 1906), Man P'ang pət. Gelao peu (Clarke 1911), Gao pa^{C-h}, Hagei pɛ, Duoluo pu, Aou he, all from *p(h)wo[t].

OJ -swo = -so '(compound) '10' (miso '30', yaso '80'), from *sao < *sawo < *tsa-po[ṇoxot], precisely paralleling compounds ('one' + '10') in Austronesian (Philippine); see ONE.

Jp. too, OJ töwo '10' appears to parallel OJ so- < *sawo (with destressing) but the initial t- needs explanation (see ONE - Note 2).

NOTE: For the phonology of -so, cf. HAIR/: so < *tsaboc.

TERMITE See ANT/.

THAT/PRONOMINAL (3rd) P-Austro-Tai *na

P-Austronesian *[n,ń]a: P-Malayo-Polynesian id. 'there (near addressee)' (Blust 1970): P-Philippine *na 'common genitive determiner' (Reid 1979), from '3rd person pronoun' < 'that (one)'. Saaroa (Tsouic) kana?a 'that' (cf. kani?i 'this' (see PLACE^{I} for ka-), na:na 'there'.

P-Kadai- *na$^{A/B}$: P-Li id.: Southern Li na^{B} '3rd person pronoun'; Bao-ding, Zhong-sha, Hei-tu, Xi-fang, Tong-shen, Qian-dui, Bao-cheng na^{A} 'id.'; White Sand na^{B} 'that, there'; Bai-sha id. 'that'.

P-Kadai *(C$_{ts}$)anan$^{A/B}$ < *(k)anan < *(k)a-na-n (cf. Saaroa, Miao-Yao): P-Southern/Central Tai *nan^{B} 'that'; also (Lao) 'he' (F-K. Li 1977:112) ~ P-Southern Tai *hnan^{B} 'there' (ibid.), from *(h)naan (with vocalic transfer; *-aa- > -a- before dental final). Gelao: Gao nan^{A} '(compound) here; there; where' (locative usage).

Jp. -na 'particle marking a part-whole or inseparable relationship between an attribute and its head' (Kawamoto 1978), used only between nouns, already fossilized in Old Japanese and retained in the modern language only in a few compounds: tanagokoro 'hand-its-heart/center' = 'palm/hollow of hand', manako 'eye-its-child' = 'pupil' = 'eye'.

NOTE: The suffixed *-n of the Kadai form is probably to be regarded as the same element found in both Austronesian and Kadai affixed to a similar deictic: *?iya(-n); a less likely possibility is a derivation in Kadai from an earlier reduplicated root (cf. Saaroa).

THIGH P-Austro-Japanese *[q,?]u(m)pəw((m)pəw)

P-Austronesian- *[q,?]upu: P-Hesperonesian- *?upu: P-Northern Philippine *?u(-l-)pu: Luba, Kankanay ?u:pu; Isneg, Itneg, Inibaloi, Ifugao ?u(:)lpu; Manabo ?ułpu; Yogad, Gaddang, Itawit ?uffu.

Jp. momo, OJ mwomwo = momo.

THRUST/STICK/SPEAR P-Austro-Tai *(ń)tśuk(tśuk)

P-Austronesian *ts$_3$ukts$_3$uk: P-Hesperonesian *t'ukt'uk = *t'$_2$ukt'$_2$uk 'stick into'; also (Ngadyu Dayak) '(threaded on =) strung on'. Paiwan suksuk 'an object pulled in-and-out of a hole', s-m-uksuk ~ pa-suksuk 'work something in-and-out of a hole'.

P-Austronesian- *(n)ts$_2$u(n)ts$_2$uk: P-Malayo-Polynesian *t'ut'uk = *t'$_2$ut'$_2$uk (partial reduplication) 'stick'; also (Fijian) 'spear fish'.

P-Kadai- *zuk < *nsuk: P-Southern Tai *zuk 'thrust/push into'; also (White Tai) 'thread' (v.); Siamese, Lao suk^{L}; Shan s[raised inverted comma]uk^{L}; White Tai suk^{L}.

P-Miao-Yao *tsho? < *tshok: P-Yao id.: Mien: Chiengrai tsho? 'stick into, poke into' (with secondary aspiration as initial).

Jp. tuk-i 'thrust, pierce, spear, prick'.

TOOTH P-Austro-Tai *(N)Gi(m)pan

P-Austronesian *(N)Gipən (with destressing): P-Malayo-Polynesian *?ipən = *ŋipən ~ *?ipən: P-Philippine *ŋi:pən; P-Polynesian *nifo < *ŋipə . P-Atayalic *gipun < *gipən; P-Paiwanic *nipən: Bunun nipun; Thao ni:pin; also (with *i > /ə/ assimilation) Saisiyat nəpən.

P-Kadai *C$_w$(V$_p$)(m)pan^{A} < *[G](i)(m)pan: P-Tai *van^{A} (F-K. Li 1977:79), from *bwan^{A} < *mpwan (nasal increment form, labialized by *C$_w$). P-Kam-Sui *pywan^{A}: Kam pyan, Mulao fan, Sui wyan^{H} ~ vyan^{H}, T'en wan^{H} (labialized, as in Tai; also palatalized by *V$_p$ with vocalic transfer). Be ton^{A} (Handricourt 1965) ~ tin^{A} (Hashimoto 1980), from *tian < *tyan < *pyan (regular shift) (palatalized but not labialized). Lakkia wan^{A} < *bwan^{A} (cf. Tai). P-Li *phywan^{A}: Southern Li phen ~ fen; Hei-tu phen; Bao-ding, Zhong-sha, Qian-dui, Bao-cheng fan; Bai-sha faŋ; White Sand fa:ŋ; Yuan-men fhan; Bupäli saŋ, Xi-fang sen; Mefuli xien; Jia-mao tshaŋ. P-Gelao *p(y)an^{A}: Gelao paŋ (Clarke 1911), Gao pan^{A}, Thü du pio (cf. du ləpu 'breast', du buŋu 'neck').

P-Miao-Yao- *p[aay]^{A}: P-Miao id. 'molar tooth' (F-S. Wang 1979:23, 141), from *[SYL]pa[n].

Jp. Fa ~ (compound) -ba (see TOOTH/FANG).

NOTES

1. Northern Philippine: Inibaloi saŋi 'tooth'; Ilocano, Itneg sa:ŋi 'molar tooth' suggest an alternative trisyllabic reconstruction: P-Austronesian/P-Austro-Tai *[ts,tš,tś]a(N)Gi(m)pan, serving to explain the atypical destressing in the final syllable as well as the aspiration in Li (Kadai).

2. The 'disappearing' initial *ŋ- of the Proto-Malayo-Polynesian root has often been interpreted as a 'linking ŋ-', but this fails to account for the Formosan forms. P-Atayalic *g regularly represents P-Austronesian *γ, hence

stands for P-Austro-Tai postvelar *R as well (7.8); this root presents evidence that it also stands for the postvelar voiced stop: *G. The initial P-Malayo-Polynesian *ŋ- ~ *ʔ- and P-Paiwanic *n- represent the nasal increment reflex: *NG. What is more, the *G- works well in explaining the secondary labialization in Kadai (commonly after velars).

3. P-Austro-Tai final *-at yielded P-Miao-Yao *-a(a)y (Benedict 1975:163). This root offers solid evidence that final *-an, with homorganic dental nasal, underwent the same shift in Proto-Miao-Yao.

4. See Footnote 9 for the Kam-Sui/Kadai phonology.

TOOTH/FANG P-Austro-Japanese *[t,C]agi

P-Austronesian- *[t,C]agi: P-Hesperonesian- *tagi: Cham tagei.

(II) *[t,C]agi > *gigi

P-Austronesian *gigi: P-Hesperonesian id. 'tooth' < 'canine tooth/fang/tusk', on basis of the Toba-Batak gloss: 'point of pickax'. Tsou si-kiki 'gnash, grit the teeth' (Tsuchida 1976:227).

P-Austronesian- *gigit < *gigi-t: P-Hesperonesian *gigit 'bite off'.

OJ kyi = ki 'fang/tusk'; Jp. kiba 'canine tooth (-ba)'.

TOP P-Austro-Japanese *babaw

P-Austronesian *babaw 'up, above' (Tsuchida 1976:247): P-Malayo-Polynesian id. 'top side'.

Jp. Fo 'ear, spike (of grain); head (of spear); crest (of wave)', with basic meaning of '(top =) something prominent/protruding' (Ōno et al. 1982; Martin 1979; Miller 1967). The core meaning of 'top' is directly reflected in Jp. Fo-tu-ye 'top-its-branch' = 'top branch' (Miller 1967 citation).

TREE P-Austro-Japanese *kašiw

P-Austronesian *kaS_2iw = *kašiw (Tsuchida 1976:247).

OJ kë, from *kai < *kay[iw] < *kašiw.

Jp. ki, OJ kï (common form), from *koi = *köi < *kəyi < *kəyii < *kəyiw < *kəšiw (with destressing).

TRUNK See STEM/. TUBE See BORE/. TUBER (EDIBLE) See FIELD (DRY)/.

TURN/RETURN P-Austro-Japanese *(m-)wiḷiq

P-Austronesian *w_1iliq_2 = *wiḷiq 'return' (Tsuchida 1976:145): P-Hesperonesian *?uli? 'turn back'; also Javanese, Malay tolih (< *ta-uli?) 'turn the head'; P-Philippine *?u:li? 'return (something)'; also *?[u breve]li? ~ *pa-?u:li? 'return (home)': P-Oceanic *uli '(turn =) steer'.

P-Austronesian- *m-wiḷiq: P-Hesperonesian *muli? < *m-uli? 'return home'; also (Malagasy) 'turn back'.

Jp. mi-, OJ mï 'turn', from *mui < *muḷiq < *m-wiḷiq (as in Proto-Hesperonesian), with regular loss of *-ḷ- and *-q (7.14); the prefixed *m(a)- (9.20) was incorporated, as in Hesperonesian.

TUSK/BOAR P-Austro-Japanese *walis

P-Austronesian- *walis: P-South Formosan *$w_3aɬiS_1$ = *walis 'tooth' (Tsuchida 1976:147); also (Saisiyat, Pazeh, Bunun) 'tusk/fang', (Bunun, Thao) '(tusked one =) wild pig': Saisiyat waliś 'fang', waliś-an 'wild pig (male)'.

Ryukyuan: Shuri wā 'pig' (Chamberlain 1895), from *wa[lis].

Jp. i, OJ wi 'boar', from *wi[lis] (*a > *i assimilation).

TWENTY See PAIR/.

TWO P-Austro-Japanese *putśa

P-Austronesian- *pu[ts_3/s]a (bound form): Paiwan -pusa- in maka-pusa-ł 'two (for frequency and duration of time: two times, two days, etc.)'; P-Tsouic *-pusa-: 'two (years, nights, fathoms, etc.)': Tsou -pus- ~ -pso- (< *-pusa-); Kanakanabu, Saaroa -pusa- (see forms cited in Tsuchida 1976:128, 187, 287).

Jp. Futa-.

NOTE: It would appear that this was the early (at least Proto-Austro-Japanese level) root for 'two in a series', still maintained in Paiwan and Tsouic but only as a bound form. In Japanese the basic Proto-Austro-Tai root for 'two' appears to have undergone a highly specialized semantic development (7.61), with the consequent extension of /Futa/ to its present general role as the numeral 'two'.

UNCLE See GRANDFATHER ~ GRANDCHILD/.
UP See RISE/.
VALLEY See HOLD TOGETHER/.
VULVA See PENIS/.

VULVA/PENIS P-Austro-Kadai (I) *tupi

P-Austronesian- *tupi: P-Paiwanic- id.: Saisiyat topi 'vulva'.

P-Kadai- *[SYL]pi^{C} < *[tu]pi: White Sand Li pi^{C} 'male genitals'.

(II) *tupi > *pipi

P-Austronesian *pipi: P-Polynesian *fifi 'vagina'; P-Atayalic *pipi? 'vulva'.

Jp. Fii, OJ Fiwi 'baby's genital area' (Martin 1979 citation), from *Fibi (with secondary voicing).

Ryukyuan: Yonaguni hii, Shodon hwi(i) 'vagina', apparently with development closely paralleling that of Japanese.

NOTE: For the semantic development, cf. PENIS/VULVA - Note. In this root, however, an original 'epicene' meaning such as 'genitals' may be justified by the Japanese gloss.

WASH P-Austro-Tai *(n)tsu(n)tsuk

P-Kadai *(n)su(n)suk: P-Southern Tai- *z[u,uu]k < *ns[u,uu]k: Ahom suk 'wash', Shan s[raised inverted comma]uk^{L} 'wash, as the face'. P-Kam-Sui suuk^{H} < *susuk: Kam śuk (tonal reflex for vowel length) 'wash (hands)', Mulao suk 'wash hands, clothes; (compound) bathe'; also *su[u]k^{L} < *zusuk (tone-lowering effect) < *nsusuk (with only initial nasal increment): Sui suk^{L} 'wash (hands)'; also *zuk^{H} < *suzuk (tone-raising effect) < sunsuk (with only medial nasal increment): Mak źuk^{H} 'wash (face, clothes, etc.)'. Lakkia uk 'wash (hands)', from *[ź]uk (cf. Mak).

P-Miao-Yao *ntsho^{C} 'wash (clothes)' (Purnell 1970:226, F-S. Wang 1979:55, 149), from *ntsu[tsuk] (with typical Miao-Yao canonical reduction-right).

Jp. susug-i 'wash, rinse, pour on'.

Jp. sosug-i 'id.' (with destressing in SYL-1 only).
Jp. sosog-i 'id.' (with destressing in both syllables).

NOTE: The Proto-Kadai final *-k is ambiguous for P-Austro-Tai *-k ~ *-q ~ *-g; the final *-k reconstruction involves secondary voicing in Jp., with both final *-q as well as final *-g (rare) alternative reconstructions at the P-Austro-Tai level.

WASH/BATHE P-Austro-Kadai *ʔa[R]ap

P-Kadai *ʔa[R]ap 'bathe': P-Tai *ʔaap (F-K. Li 1977:244) (with *-[R]- > [0]). P-Kam-Sui *ʔ[R]aap: T'en *ʔɣaap; Mak, Maonan źaap; Kam ʔa:p; Sui ʔap (with vocalic transfer). P-Li *ʔa:p: Bao-ding, Zhong-sha, Hei-tu, Xi-fang, Bai-sha, Yuan-men, Tong-shen, Qian-dui, Bao-cheng ʔa:p; also (destressing > vocalic transfer form) Jia-mao ʔɨp. Gelao: Gao ai^{C-h} < *ʔa[ap] (cf. Tai).

Jp. ara-i, OJ araF-i 'wash, wash off/out, rinse'.

NOTES

1. The Kam-Sui reflexes appear to be irregular for an initial *ʔɣ-, with *ʔ[R--] as a provisional reconstruction, but additional data on the Kadai languages may reveal that *ɣ and *R merged in Proto-Kadai, with *ʔɣ- reconstructible also for Proto-Kadai in this root.

2. Old Cham araw 'wash' appears to represent an Austronesian/Hesperonesian cognate, perhaps from P-Austronesian *ʔaɣab, suggesting P-Austro-Kadai *ʔaRab rather than *ʔaRap as the reconstruction for this root; an alternative possibility is the derivation of the provisional P-Austronesian *ʔaɣab from *ʔaɣapʔaɣap (secondary voicing).

WATER See JUICE/.

WEAK/FAINT P-Austro-Japanese *lu(n)tsu

P-Austronesian- *[l,l]ə(n)ts_1u: P-Hesperonesian *lə(n)t'_1u 'weak/faint' (with destressing).

Jp. usu- 'thin; weak, faint'.

WEST See DOWN/. WHITE See LIGHT/.

WHO P-Austro-Japanese *tśayi

P-Austronesian- *ts_{123}ayi: P-Malayo-Polynesian *t'a[y]i = *t'_{12}ayi.

OJ ta, Jp. ta- (compound); tare ~ dare.

WIDE/LEVEL/SHORE P-Austro-Kadai (I) *(m)paŋ(m)paŋ

P-Austronesian- *paŋpaŋ: P-Hesperonesian id. '(be wide apart =) stand apart'; also (Malay) 'broad surface': Tagalog, Northern Philippine: Kapampangan pampaŋ < *paŋpaŋ (with *ŋ > /m/ assimilation) '(broad/flat surface =) seashore'.

P-Kadai- *paaŋ$^{A/C}$ < *paŋpaŋ: P-Southern Tai- *paaŋ^{C}: Shan pa:ŋ 'be level, as a tract of land; be clear, cloudless; an extensive plain', Khamti id. 'open (unconfined) space', Ahom paŋ 'high land, plain'. Be baŋ^{A} < *paŋ^{A} 'clear, luminous' (Handricourt 1965), 'bright, shining, shiny; light (n.)' (Hashimoto 1980) (cf. Shan for the semantics).

Jp. Fama 'shore/beach', OJ also 'riverside, river bank', defined in [O-]no et al. 1982 as 'level ground/plain of water's edge/beach of sea, lake, etc.' (with only medial nasal increment).

OJ mama '(rocky bank =) cliff' (with initial and medial nasal increment).

(II) *(m)paŋ(m)paŋ > *baŋbaŋ

P-Austronesian- *baŋbaŋ: P-Hesperonesian id. 'wide, spread out'; also (Malay) 'flat and broad', (Toba-Batak) 'spacious', (Malagasy) 'limitless space'.

P-Kadai- (C_t)(V_i)baaŋ^{C} < *(qa-)baŋbaŋ (with optional *qa- prefixation): P-Southern Tai- *baaŋ^{C}: Siamese phaaŋ^{L} '(compound) surface of the earth'. P-Kam-Sui *ʔba^{C} (ʔbaŋ^{C}) < *ʔbaŋ(baŋ): Sui, Mak *ʔba; Maonan ba^{H} 'wide/broad'; Mak also ʔba ʔbaŋ 'wide(ly)'.

Jp. Faba 'width/breadth'.

NOTE: The polysemy of this root is remarkable, even within Hesperonesian: Dempwolff's (1938) basic gloss for *paŋpaŋ is 'aus einander stehen', based on Malagasy 'chasm' and Ngadyu Dayak 'prong, antler', but this will hardly do for the glosses in Malay ('broad surface') and Tagalog ('seashore'). The Japanese cognates, perhaps significantly, show a similar split in glosses between 'shore' and 'cliff', hence it might be argued that two homophonous converging roots are involved here.

WIDE OPEN/OPEN(ING)/HOLE (IN GROUND)/GRAVE P-Austro-Kadai *labak

P-Austronesian- *[l,ļ]abak: P-Malayo-Polynesian *labak 'wide open' (Blust 1980a); also (Cebuano) 'for a sore of an infected wound to be opened wide', (Sasak) 'spacious, wide'. This is clearly the same root as P-Austronesian = P-Hesperonesian *labak '(opening/hole =) depression' (not cited by Blust), which Dahl (1976:108) added to the corpus of Austronesian roots; also (Tagalog) 'depression in the ground', (Malagasy) 'hole in the ground', (Maanyan) 'depression between mountains' = 'valley' (cf. the Tagalog form cited in Note 2).

P-Kadai- *baak < *[l]abak (with vocalic transfer): P-Southern Tai-*baak: Shan paak^{L} 'a space' (cf. the Cebuano form cited in Note 1).

Jp. abak-i 'open (grave); (make open =) expose, reveal'.

Jp. Faka 'grave', from *Fak-a, with nominalizing suffixed *-a.

NOTES

1. As an alternative Proto-Malayo-Polynesian reconstruction, Blust 1980a cites *labəʔak/laʔəbak, based on a Cebuano doublet form: labʔák 'get to have spaces or omissions in between', but this appears to be simply a derivative of the above root with metathesized *q(a)- prefix: *q(a)-labak > labʔák.

2. Although not noted by either Blust or Dahl, this root is evidently related to P-Hesperonesian *ra(m)bak 'widen out/spread out'; also (Tagalog) '(widening out =) valley', (Fijian) 'wide'. Variation of this kind suggests an earlier variable infixation with canonical reduction-left (cf. the Formosan forms under RICE), from a basic root of *C$_i$abak shape; in any event, the Jp. abak-i reflects an earlier *labak, with regular *l- > [0].

See WILD FOREST/.

WILDERNESS/MOUNTAIN P-Austro-Kadai *ri(m)ba > *ra(m)ba

P-Austronesian- *ri(m)ba ~ *ra(m)ba (with *i > *a assimilation): P-Hesperonesian id. 'wilderness'; also (Ngadyu Dayak) 'forest'.

P-Kadai- *pa^{C} < *[a]ba (apparently unvoiced by *r > *h): P-Southern Tai/P-Northern Tai *paa^{C} 'wilderness, meadow' (F-K. Li 1977:61); also generally 'forest/jungle': White Tai 'forest, brush, savannah, uncultivated country (any space uncultivated or covered with brush)'.

Jp. yama 'mountain', OJ also 'uninhabited land'.

NOTE: Kawamoto (1977) interprets the two glosses of the Japanese form as representing distinct roots, even suggesting another Hesperonesian comparison for 'mountain', but this would appear to be quite unnecessary; in Japan from the earliest period, surely, 'uninhabited land' and 'mountainous land' have covered much the same terrain! It is not difficult, therefore, to interpret 'mountain' as a simple extension of 'wilderness', with complete replacement of the earlier meaning in the modern language. A parallel semantic development is represented by Yao: Mun kiem 'forest' ~ 'mountain'.

WIND See BLOW/.
WING See BEAT/.

WINNOW/WINNOWER P-Austro-Japanese *ta(m)pus

P-Austronesian- *tapus: P-South Formosan *tapuS_1 = *tapus 'winnow' (Tsuchida 1976:152); also (destress doublet) P-South Formosan *tapəS_{13} = *tapəs 'id.' (ibid.).

Jp. mi, OJ mï 'winnower', from *mui.

NOTES

1. An apparently related Formosan root, perhaps from an earlier infixed *-l- or *-r- derivative, is represented by P-Formosan *Capu[s,h]: Puyuma [t.]apu-i 'winnow'; Atayalic: Squliq sapuh 'sweep' (see Note 2 for the semantics).

2. Tsuchida (1976:194) suggests that *tapus 'may ultimately be unifiable' with P-Malayo-Polynesian *ta(m)pi 'winnow' and Dahl (1976:34) goes much further in simply merging the two roots in the destressed form: *ta(m)pəs, despite the discrepancy in finals. P-Malayo-Polynesian *ta(m)pi is entirely distinct, however, from a P-Austro-Tai root of the same shape (Benedict 1975:425), represented in Miao-Yao as well as in Kadai, with a proto-meaning of 'sweep/fan' > 'winnow' ~ 'wipe', e.g., P-Polynesian *tafi < *tapi 'sweep'; also (Samoan) *tapi < *tampi 'wipe off'; Lao $bian^{A-h}$ < *ʔ$bian^{A}$ < *[ta]mpi-an 'large winnowing basket for rice' (cf. the Austronesian *-an referent-focus marker); this root appears in Formosan in the nasal increment form: P-Paiwanic *tabi(bi) < *tampi(mpi): Puyuma: Hinan tabi '(rice-pounder =) mortar' (cf. Ngadyu Dayak tepe = tempe 'pound rice'); Ryukyuan: Budai wa-bi:bi: 'wipe' (wa- is actor-focus marker).

WOOD (CHIPS) P-Austro-Japanese *pa(ń)caŋ

P-Austronesian- *pa(ń)caŋ: P-Hesperonesian *pa([ŋ˺])k'aŋ 'piece of wood'.

Jp. Fota 'chips, piece of wood; firewood' (with destressing).

WORM See SNAIL/.

WORM/MAGGOT/LARVA P-Austro-Kadai *[q,ʔ]u(n)zəy

P-Austronesian- *[q,ʔ]u(n)[z]ay: P-Malayo-Polynesian *ʔuḍay = *ʔu(ṇ)ḍay 'worm'; also (Javanese) 'intestinal maggot': P-Polynesian ule < *ʔuṇḍay 'penis'.

P-Kadai *C_tu(n)[z]əy^C < *[q,ʔ]u(n)[z]əy: P-Southern Tai-*ʔdii^C: Lao dii^H 'glow-worm'; P-Northern Tai- *ʔduay^C ~ *ʔday^C: Dioi duai^H ~ dai^H 'larva of the large bamboo weevil' (with variable vocalic transfer); also (with nasal increment) *hnay^C: Dioi nai^H 'penis (decent term)' (perhaps because basically non-sexual; cf. the Proto-Polynesian nasal increment form).

Jp./OJ uzi 'worm, maggot, larva'.

NOTE: Provisional *[z] reconstructed for Proto-Austronesian and Proto-Kadai in view of the apparent lack of cognates in groups with disambiguating reflexes (Paiwanic and Li, respectively); the OJ /z/ disambiguates from medial *-br- > OJ -d- (see LIVE/).

YEAR P-Austro-Japanese *[t,C]uxi[γ,R]

P-Austronesian- *[t,C]uqiγ: P-Hesperonesian- *tuqiγ: Cebuano tu:ʔig, P-Manobo (Philippine) *tuʔig.

Jp. tosi, OJ tösi (with destressing).

YELLOW P-Austro-Kadai *kulijaŋ

P-Austronesian *kulijaŋ: P-Hesperonesian *kunij < *kunij[aŋ] '(something yellow =) turmeric' (cf. German *Gelbwurz*); also Chamic 'yellow': Old Cham kańik ~ ńik (with destressing); Huihui (Hainan) ńi^4 < *[ka]ńi[k] (tonal reflex [4] for unvoiced initial: *k-); P-Hesperonesian also the allofam: *kuniŋ 'yellow', from *kuni[j]aŋ (syncopated form). Siraya ma-koulianŋ = *-kulianŋ 'id.', also from *kuli[j]aŋ but with maintenance of secondary -ia-.

P-Kadai *$C_{ts}V_p$lia$ŋ^A$ < *[kə]lia$ŋ^A$ (syncopated form, as in Austronesian; with destressing, as in Chamic): P-Southern/Central Tai

*hlɨaŋ^{A} (F-K. Li 1977:138, 283) (with vocalic transfer). Be laŋ$^{A-h}$ < *hl[ɨa]ŋ^{A} (cf. Tai). P-Li *[SYL]liaŋ^{A}: Southern Li hieŋ ~ yɛŋ, Northern Li tleaŋ ~ theŋ, White Sand źia:ŋ, Tong-shen ɬe:ŋ^{L}, Bao-ding ze:ŋ.

Jp. ki ~ (compound) ko- (destressed form), from *kï < *kui < *ku[l]i[jaŋ], with regular loss of *-l- (7.71).

YOUNG/SMALL P-Austro-Tai *[q,ʔ]o[t,C]on

P-Miao-Yao *tɔn^{A} < *ton^{A} (regular shift) 'son' (Purnell 1970:189, F-S. Wang 1979:87, 173); also (P-Yao) 'small' (Purnell 1970:186); also (Mien: Chiengrai) 'offspring; young (fauna)', (Miao: Cheng-feng) 'children; young (of animals, plants); small (boats, etc.)'.

Jp. oto, OJ ötö 'younger brother'; OJ also 'last' = 'youngest (child)'.

Jp. oto- '(compound) younger [sibling; uncle/aunt]'.

Jp. otogo 'last (oto-) child (-go)'.

Jp. otoFime 'youngest (oto-) princess (-Fime)'.

Jp. otogai 'lower (oto-) holder (of mouth) together (-gai)' = 'lower jaw' (see HOLD TOGETHER/).

FOOTNOTES

1. Thurgood (1985) has set up, on the basis of complex tonal splitting, two Kam-Sui subgroups: Kam: Mulao T'en vs. Sui/Mak/Maonan. A study of the comparative material that he presents, however, discloses the following curious fact: in the case of lexical items for which Kam/Mulao and Sui/Mak have differing cognates/cognate sets, and for which T'en and Maonan differ, Maonan agrees equally with Kam/Mulao and Sui: Mak (four with each), whereas T'en has no fewer than 26 agreements with Sui/Mak but none with Kam: Mulao! It would appear, therefore, that T'en basically belongs with Sui/Mak but has been influenced tonally by Kam: Mulao while the position of Maonan is unclear.

The subgrouping for the Li meso-language has not yet been established while for Gelao the necessary material remains unavailable. The writer (1975:442) has proposed a main cleavage in Li between 'Southern', which maintains nasals throughout, and 'Northern', with secondary stops from original (Proto-Li) *[SYL]nasal; see HAIR/, HAND: FIVE, LOWLANDS/, and SIX. Solnit (1982) has shown that several of these nasal-shifting Li roots correspond to Sui forms with initial voiceless nasals and has proposed that such be reconstructed also for Proto-Li, but the *[SYL]nasal reconstructions appear to work better in many cases, as in the above roots, notably in HAIR/ (see entry). Among the earlier recorded Li dialects (see Benedict 1975:442), only Bupäli shows any marked irregularity on this point, with only partial nasal > stop shifting, and of the many dialects that have recently become available (Ouyang and Zheng 1983), only Jia-mao exhibits this feature. This dialect (= language), which closely resembles Bupäli, is markedly deviant in many respects and occasionally has cognates for Kadai roots not otherwise represented in Li. Proto-Li reconstructions must be devised with the Bupäli/Jia-mao forms in mind, e.g., for the interesting HAND/FIVE doublet in Li, these forms show P-Kadai final *-a maintained for 'hand', along with prefixed *k- in Jia-mao, but shifted (> -o ~ -u) for 'five', whereas all other Li dialects show precisely the reverse! Whatever final scheme for Proto-Li eventually emerges, it seems unlikely that all the other dialects/languages will fall neatly into 'Southern' vs. 'Northern' groupings.

2. Na-e has some lexical ties with 'Tahua Yao', a Western Miao language recorded in Gwizhou (Chang 1953), notably the distinctive pair: va = Na-e va 'two', lyã = Na-e yang 'dog', but unfortunately the 'Tahua Yao' word for 'bird' was not cited by Chang. The 'dog' root, which appears in full form in 'Yao', a Northern Miao language recorded in Hunan (China) in the 18th century (Lombard-Salmon 1972): liang, is connected with Chinese (pinyin) [Chinese character #3811] láng 'wolf' < Archaic/Middle lâŋ (the palatalization is typical of early Miao loans from Chinese). Even closer ties for Na-e have recently been uncovered by David Strecker (p.c.) with Bunu, a group of languages that fit as a whole in the Western Miao bloc.

3. The rich material recently made available on the many Li dialects/languages as well as on Gelao: Gao indicates that /ə/ will play a prominent role in the eventual reconstruction of the Proto-Kadai vowel system, with the likely possibility that an original (P-Austro-Tai) *ə was retained in positions other than simply before *-w (see DOOR).

4. Graham Thurgood (1985) has recently completed a provisional reconstruction of Proto-Kadai, which has already been confirmed at some points (see Footnote 9), but much basic work remains to be done in this diffucult area.

5. Paul Li (1981: footnote 22) has interpreted the Atayalic /l/ reflex as conditioned by a following /m/, but a root showing this same /l/ reflex without the /m/ has now been uncovered, with an excellent cognate in Miao-Yao and possible cognates in Kadai (the Saek t- reflex is regular while there is evidence for Siamese pr- as a variant of the regular t-reflex for *pl-, in this root perhaps for *pl̥-) and even in Japanese (with /y/ for *pl̥, paralleling /y/ < *pr):

P-Austro-Tai *qapl̥aŋ 'enclosure' > 'village': P-South Formosan *qaCaŋ 'stone walls' (Kanakanabu), 'walls of pigpen' (Saaroa), 'pigpen' (Paiwanic) (Tsuchida 1976:165), to be amended to *qaC$_1$aŋ on the basis of Bunun /ts/ ~ /s/ in this medial position for the anticipated /t/: Bunun ʔatsaŋ ~ ʔasaŋ ~ ʔaśaŋ, Saisiyat ʔasaŋ 'village', Atayal qalaŋ 'id.'; perhaps also (with 'irregular' reflexes) Northern Philippine: Gaddang, Yogad ʔalasaːŋ (-al- infixed form) 'fence'; Cham saŋ 'house'; P-Miao-Yao *ra(a)ŋ^{B} 'village' (with optional vocalic transfer); Southern Tai: Siamese praŋ^{A} '(enclosure =) ricefield that can be cultivated during the dry season'; Saek taŋ^{A} '(enclose =) partition off (a room)'; Jp. aya '(enclosed space drawing =) plot, plan, design'.

As for Tai itself, it is now evident, from the Saek evidence in particular, that disyllabic roots with labial and other consonants in SYL-1 must be reconstructed on occasion even at the Proto-Tai level; for P-Tai *?b-l- (see text), read *?bV$_1$l-, etc.

6. It is likely, on the basis of the labial stop clusters (see 7.21, that *kl and *kl as well as *kr are to be set up at the P-Austro-Tai level but the available cognate sets are extremely limited and often lack critical cognates, as in BEAR (below). Post-velar clusters in Benedict 1975 are reconstructed on the basis, largely, of similar clusters in Proto-Miao, but it now appears that these are secondary, replacing velar clusters, as in DOG. As presently reconstructed, the *kl cluster in this root yielded P-Austro-Tai *ts$_2$ < P-Austro-Tai *tš whereas the *kr cluster in BEAR yielded Paiwanic/Tsouic *C = *c but Atayalic (Sediq) /k/ ~ /s/, with Malayo-Polynesian unfortunately lacking a cognate. Zorc (1983:13) has now shown that in two roots Paiwan has /t/ < *ts$_1$ or *ts$_2$ corresponding to P-Malayo-Polynesian *k′ = *c, as opposed to the P-Paiwanic *C < P-Austronesian *c in SEA (see analysis under 7.10). Perhaps Formosan *ts$_1$ and/or *ts$_2$ = P-Malayo-Polynesian *c will turn out to be the reflex pattern for an earlier *kl.

7. The Japanese accentual systemhas also been reconstructed in some detail in Kobayashi 1975. This study, which is focussed on the modern dialects, does not cover the Ryukyuan dialects, hence Martin's work remains the best single source for the comparativist.

8. The conventional 'focus' terminology, as presented by Dahl and others, has been adopted for this study for practical purposes, without any necessary commitment to the underlying assumptions. These have been sharply attacked by Starosta, Pawley, and Reed (1981), who argue that 'verbal focus in PAN [Proto-Austronesian] was at most an incipient mechanism that was later elaborated.' They present a large body of evidence, mostly from Malayo-Polynesian languages, in an attempt to demonstrate that at the Proto-Austronesian level the focus markers, apart from *-i but including *ni/-in- (Dahl's 'perfective' affix) and with some question about *mu/-um-, were noun-deriving affixes, with only *-ən 'possibly having begun to function to derive verbs as well as nouns.' The authors even spell out the roles in detail: *mu/-um- 'one who V's', *-ən 'the N to be V-ed', *-ana (for *-an) 'place of V-ing', *iSi- (for *ši-) 'thing for V-ing or for N', *ni/-in- 'the N affected by V-ing'.

This approach appears, in some measure, to run counter to the evidence from the generally conservative Formosan languages such as Paiwan, with model focus systems. It is a most promising one for the Austro-Tai comparativist, however, since it provides for a kind of 'testing' of the basic theory involved through an examination of those affixes that appear to be reflected in Japanese or to have been incorporated in Japanese and/or the mainland languages; cf. the entries for EAT, DREAM, and FISH. Japanese nominalizing -a vs. verbal (basically) -i (see 9.41, 9.42) fit well with the Starosta/Pawley/Reid view, granted that the two *-i suffixes are genetically related and that Japanese -a reflects *-an or *-ana, the latter reconstructed on the basis of Oceanic/Malagasy/Tsou evidence and provisionally derived from the ligature *-a- and the demonstrative *na (see THAT/). In DREAM the Japanese and Kadai nominal forms from *-an contrast with the Miao-Yao verbal form from the unaffixed root; in EAT, however, Kadai has both verbal and nominal (in Li) forms from *-an, along with a verbal form from *-ən (in Tai). Kadai (Tai) also reflects a nominalizing *-an in a widespread Austro-Tai root for 'winnow' (see WINNOW - Note 2). EAT also, however, has a suffixed *-i form, represented both in Japanese and Miao-Yao, that indicates with great precision an ancient nominalizing role for this element: 'eat' > 'meal'. In view of the early stage reflected here, far earlier than Proto-Austronesian, it is possible that this suffix was nominalizing at first, then later took on a verbal role.

The authors' *iSI for the instrument-focus marker needs special comment. Bunun has iš(i)-, as in FISH, and *iSi is designed to account for this shape of the prefix as well as that of the Philippine *?i-, only rarely hi-. As shown in Table 9 (Dyen's *x$_1$), however, a Formosan (including Bunun) /s/ can correspond to a P-Malayo-Polynesian *?-, hence an initial *š- can be reconstructed here, with support from the Paiwan (si-) and Puyuma (i-) instrument-focus markers. Even more critically, the Japanese cognate: ika 'squid' can reflect only *šika[n], with the [n] based on the Proto-Austronesian root: *šikan < *ši-ka-[a]n, with the circumfix *ši- + -an perhaps of an 'all purpose' nature, in any event creating a nominal form in this root. Bunun i- is to be interpreted as an added element, probably to be connected with the widespread, many-faceted P-Austronesian (and P-Austro-Japanese) *?i- (see 9.23).

9. In view of this well-maintained cognate set, the formulaic P-Kadai *C$_s$V$_w$(m)pian^A ~ *C$_s$V$_w$(m)pan^A can be recognized as standing for *su(m)pian ~ *su(m)pan. The contrast with the similar cognate set for TOOTH is most instructive, with the latter exhibiting a reconstructed *V$_p$ rather than *V$_w$, along with *C$_w$:

	DREAM-I	DREAM-II	TOOTH
Proto-Kadai	*C_sV_w(m)pian^A	*C_sV_w(m)pan^A	*$C_w(V_p)$(m)pan^A
	= *su(m)pian	= *su(m)pan	= Gi(m)pan
Proto-Tai	-	*fan^A/*van^A	*van^A
Proto-Kam-Sui	*pwyan^A	-	*pywan^A
Kam	pyan	-	pyan
T'en	yan	-	wen
Sui	vyan^H	-	vyan^H
Proto-Be	*bwian^A	-	*tian
(Haudricourt 1965)	bien	-	ton
(Hashimoto 1980)	von	-	tin
Lakkia	hwɛ:n^A	-	wan^A
Proto-Li	-	*phwan^A	*phywan^A
Hei-tu	-	phen	phen
Bao-ding	-	fan	fan
Yuan-men	-	fhan	fhan
Xi-fang	-	faŋ < *fan	sen
Jia-mao	-	pɔ:n < *phwan	tshaŋ < *tshan
Gelao: Gao	-	pan^A	pan^A

The Proto-Kam-Sui reconstructions, from Thurgood 1985 (see footnote 4), are fully supported by the above collation of roots; the Be shift to dental, with at least one known parallel, is similar to the Li shifts, matched by Bupăli s- and Mefuli x- from earlier known dialects.

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Abbreviations

BEFEO	Bulletin de l'École Française d'Extrême-Orient
BIHP	Bulletin of the Institute of History and Philology, Academia Sinica
BSLP	Bulletin de la Société Linguistique de Paris
ICHS	Papers presented at the 31st International Congress of Human Sciences in Asia and North Africa. Tokyo and Kyoto, 1983.
JAOS	Journal of the American Oriental Society

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